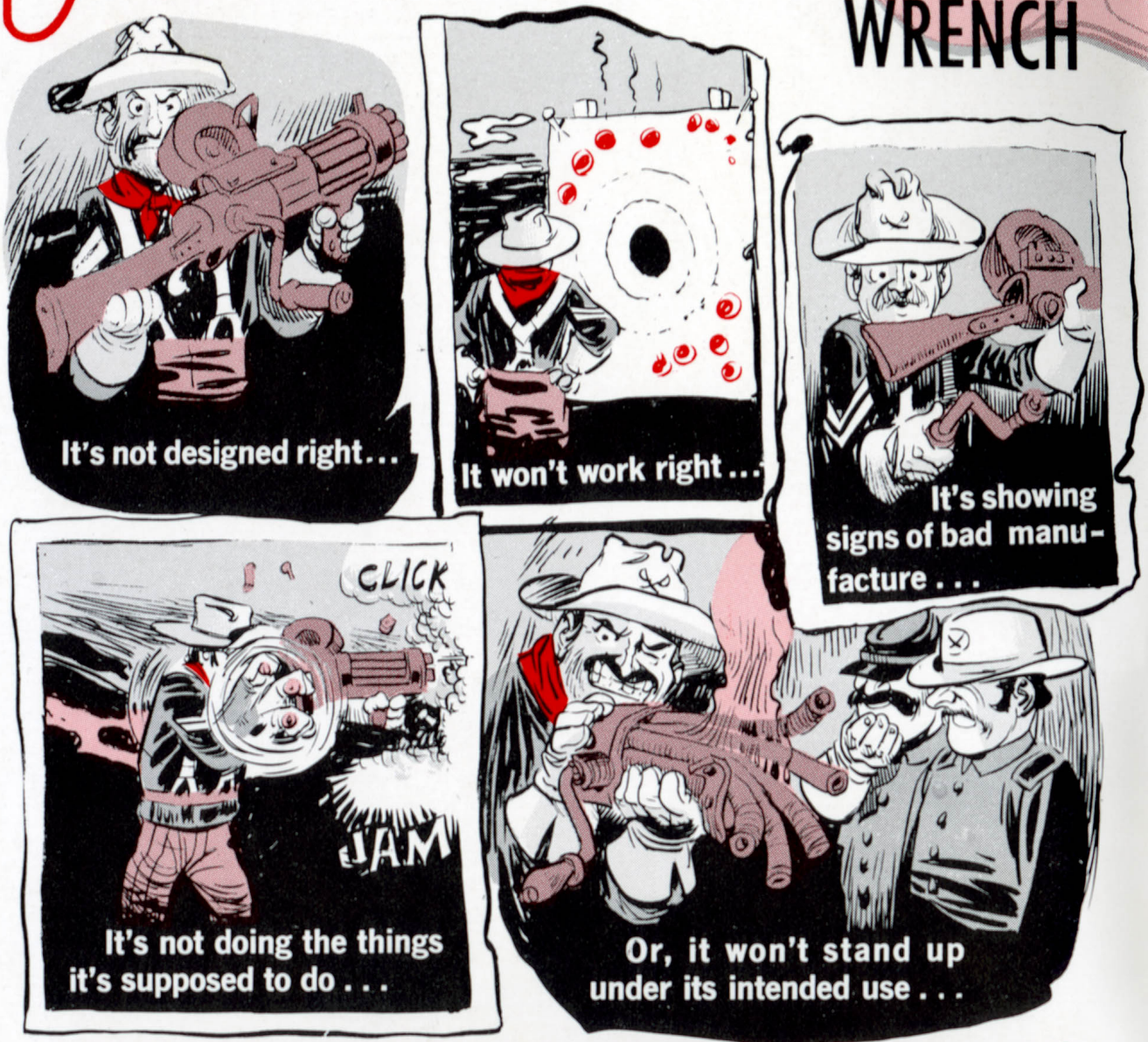
Issue 102
PS
1961 Series
THE PREVENTIVE MAINTENANCE MONTHLY
PUL-EEZE... GEN'L CUSTARD! WE'RE NOT IN SHAPE T'GO..
AMMO
Will EISNER

Your Pen IS MIGHTIER THAN YOUR WRENCH

When it comes to fixing up Army equipment that's not up to par:



your writing paw and your trusty pen are the weapons you need.

Sharpen 'em up and apply—lightning-like—to the UER (DA Form 468—Unsatisfactory Equipment Report) and you can forget about knuckle-bustin', back-breaking, heart-sobbing work with your handy wrench, screwdriver, pliers, welder, nuts and bolts . . . no patching up needed.

The tech service designers and equipment thinkers and schemers will thank you kindly when you shoot 'em the word on what's happening to their brain-children—

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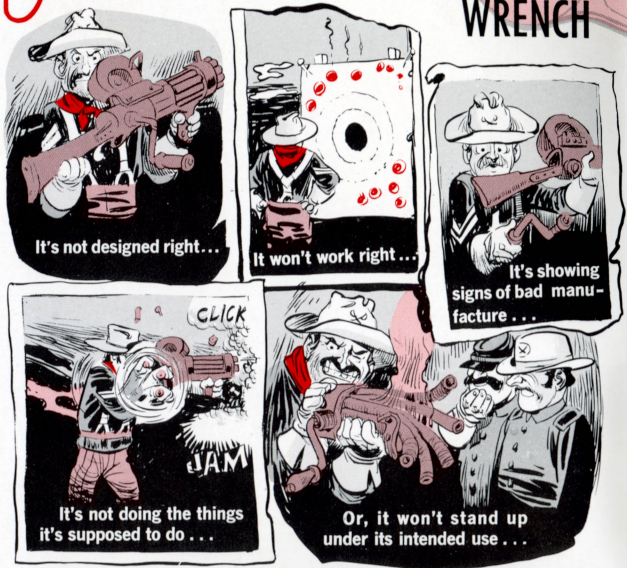

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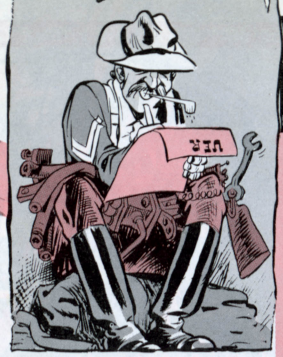

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You speak straight at the design boys. Your UER goes direct to the technical services—no channels for the UER you send in per AR 700-38. See it for all the right addresses. On Army aircraft you use DD Form 1275 like AR 700-41 says. Electronic equipment has special word in AR 700-39, and you get the word on guided missiles in AR 700-37.

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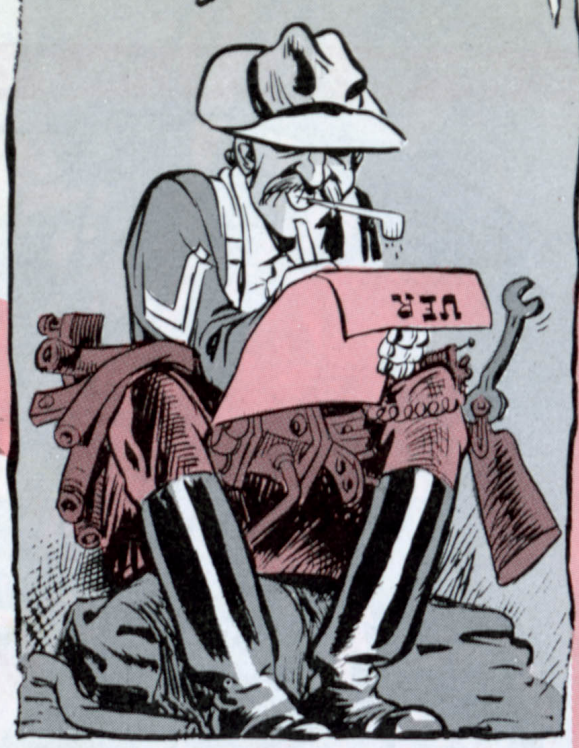

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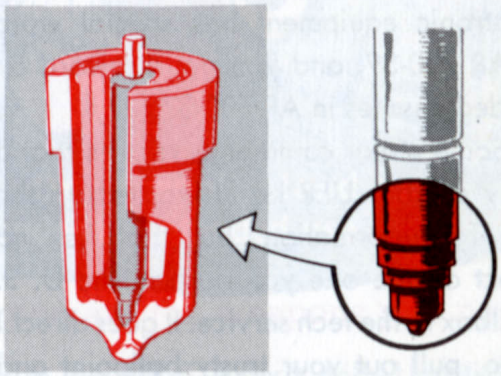
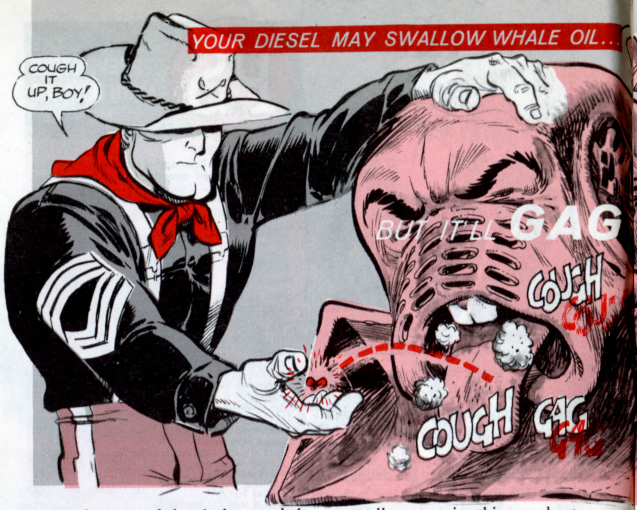
Old Jumbo'll go stark, raving mad if a mouse sneaks up his trunk. And the diesel'll go to pieces—but for real!—if the tiniest amounts of grit and moisture sneak into its fuel system.



Here's why: The diesel's fuel injection system is as sensitive as the innards of some super missiles. Its fuel pump and fuel injection valve or nozzle have parts that're machined so fine you wouldn't believe it.

When dirt or grit gets into the fuel and then into the fuel injection system it grinds away on these sensitive surfaces . . . and pretty soon the engine starts coughing and knocking and losing power and giving off heavy black smoke.

Water in the fuel rusts up these precision parts and leaves the diesel about as unhappy as it'd be with dirt in its pumps and valves.



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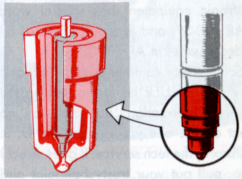

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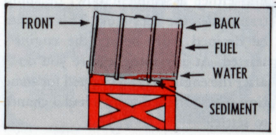
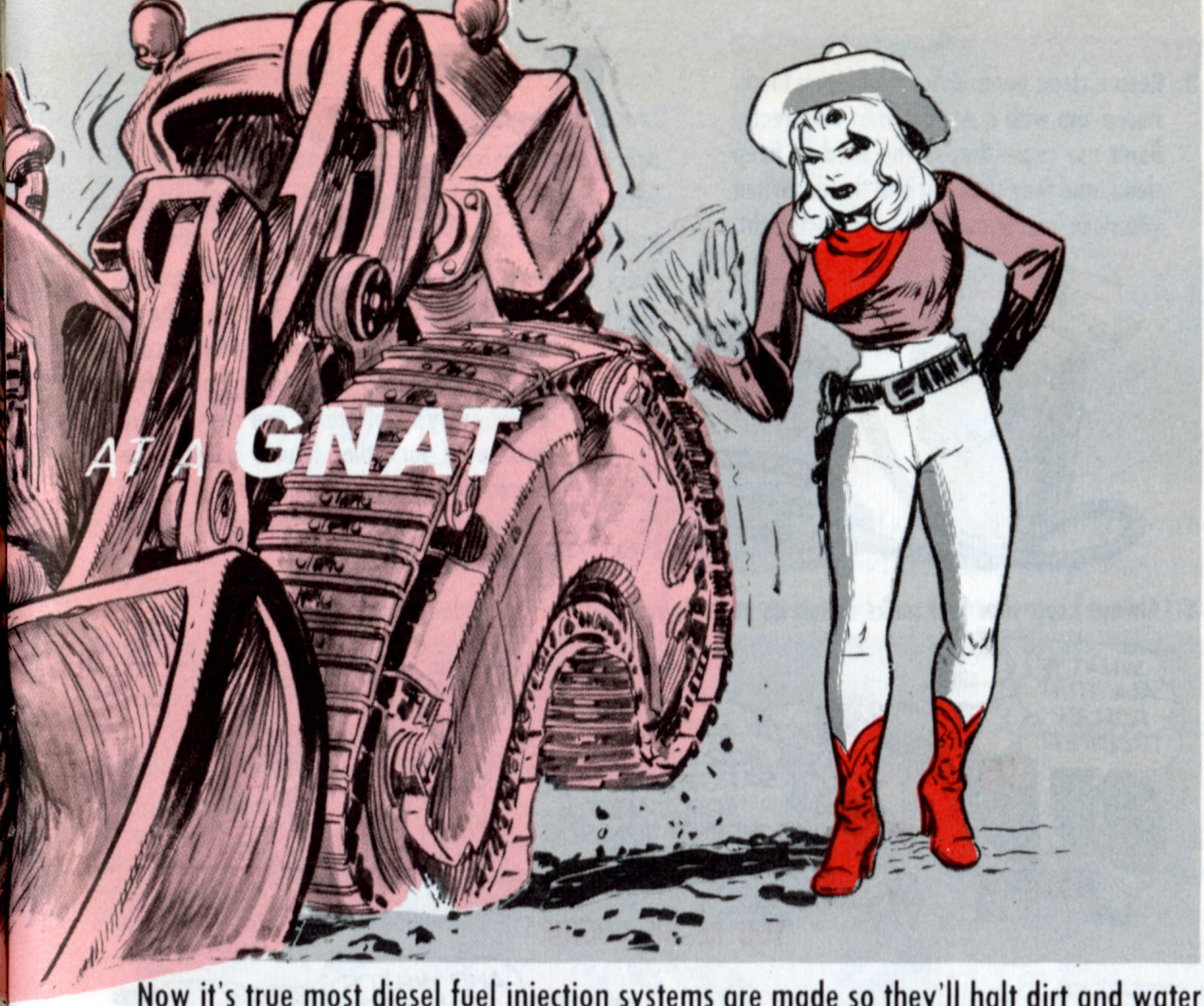
Now it's true most diesel fuel injection systems are made so they'll halt dirt and water before they get into pumps and valves—but don't depend on 'em! The place to begin protecting your fuel is in the storage drum (assuming you don't have protected storage pumps) before it even gets to the diesel.

HERE'S HOW:

1. Skip the rough stuff. Don't drop drums or other containers from trucks—even on cushions. And don't roll 'em over rocks and stuff. If you loosen scale in the drums you're loosing a peck of trouble.



2. Rack 'em up. Park your drums on racks that're higher in front than back. This'll let the mish-mash settle. Use enough drums so's the stuff can settle at least 24 hours before you use it. And always drain off the sediment and water before refilling.



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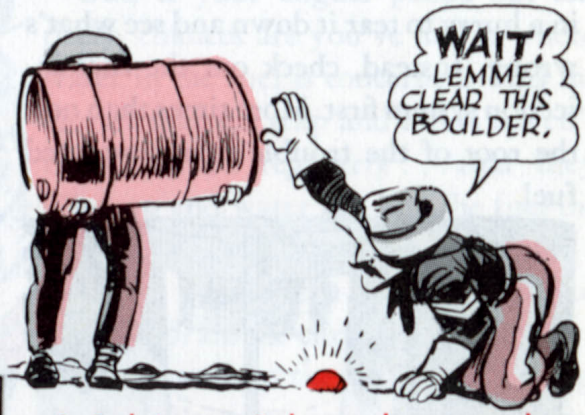

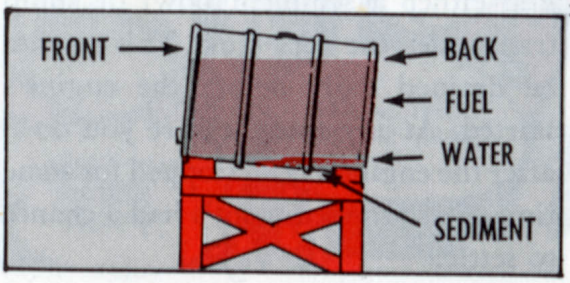

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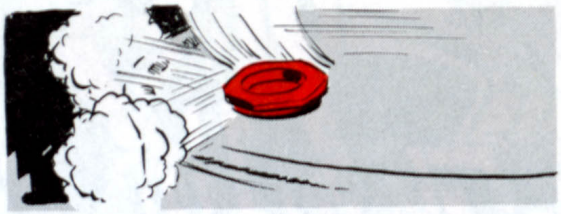
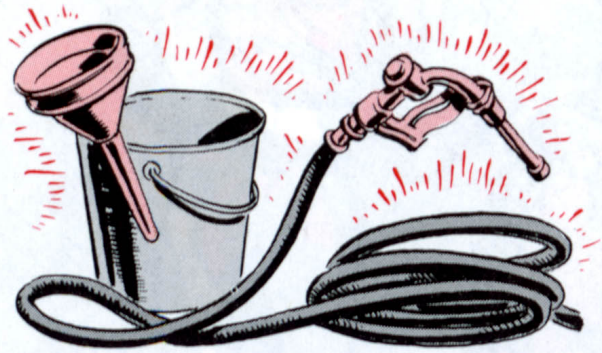
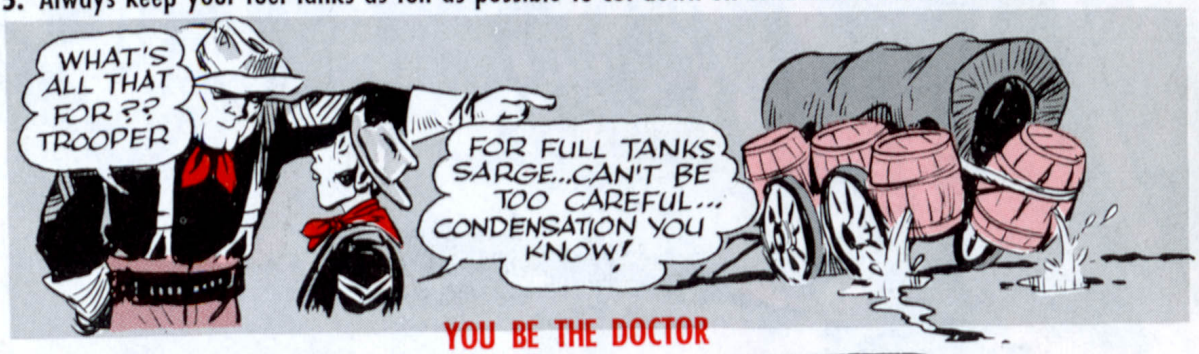
3. Keep a clean bung. Before you open them, sweep 'em with a dry brush or air stream. Don't use rags—they're too hard to keep clean, and they shed lint and thread. When you close 'em, screw the caps wrench-tight.





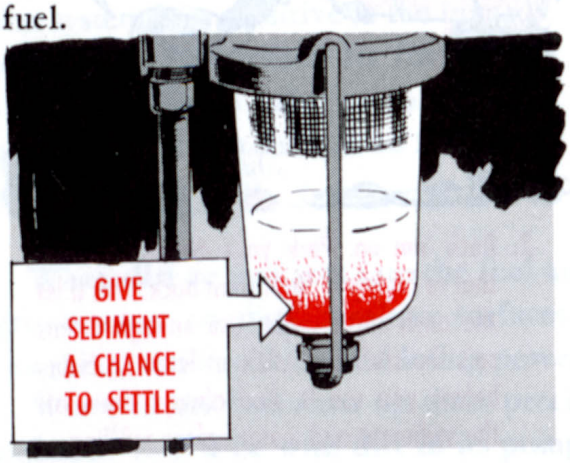
4. Be a good housekeeper. Pails, cans, funnels, nozzles, hoses, etc., all have to be as clean as you can keep 'em to prevent contamination of fuel. Wipe before and after use... every time. Drums and cans that've been used for other liquids have to be thoroughly cleaned before you use them for diesel oil. Make sure the containers are labeled right.

5. Always keep your fuel tanks as full as possible to cut down on condensation in the tanks.



YOU BE THE DOCTOR

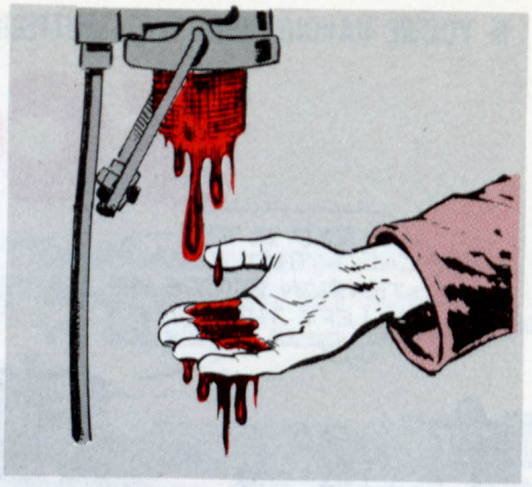
When your engine starts knocking, coughing, sputtering and belching smoke, you know it's sick. But don't be in a hurry to tear it down and see what's wrong. Instead, check out the fuel injection system first. More times than not, the root of the trouble's contaminated fuel.

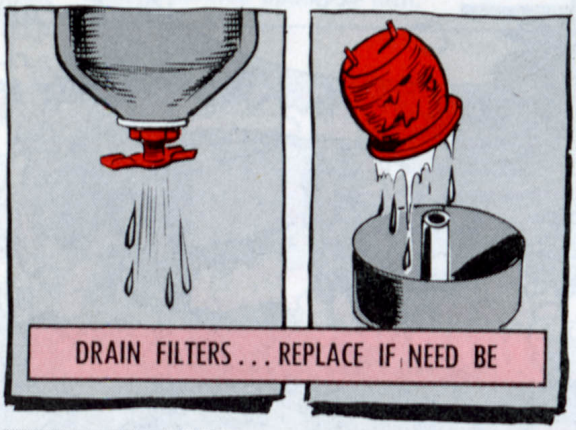


Here're some steps you can follow to track down the trouble:

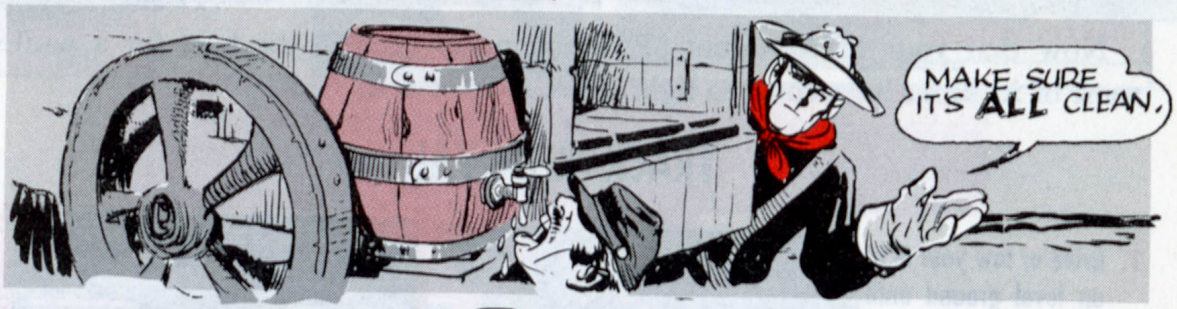
Hawkeye the traps and drains. You'll find either a sediment bowl or sump trap under the fuel tank. This oughta be drained daily before the engine's started. At any rate, be sure you do it after the engine's been stopped for some time . . . so the sediment's had a chance to settle.

Drain the trap or bowl till the fuel runs clean. Then close the trap or bowl and turn over the main engine with the starting engine (if you've got one) and open the filter drain. If you stick your hand under the drain and let the fuel drip on it, you'll soon see if it's clean or not.





Of course, if dirt and water get by the sediment bowl or sump trap, they can be eliminated further along in the fuel system by draining the filters, and replacing them, if need be. Water swells the filters and makes 'em soggy. And this hurts the flow of fuel.



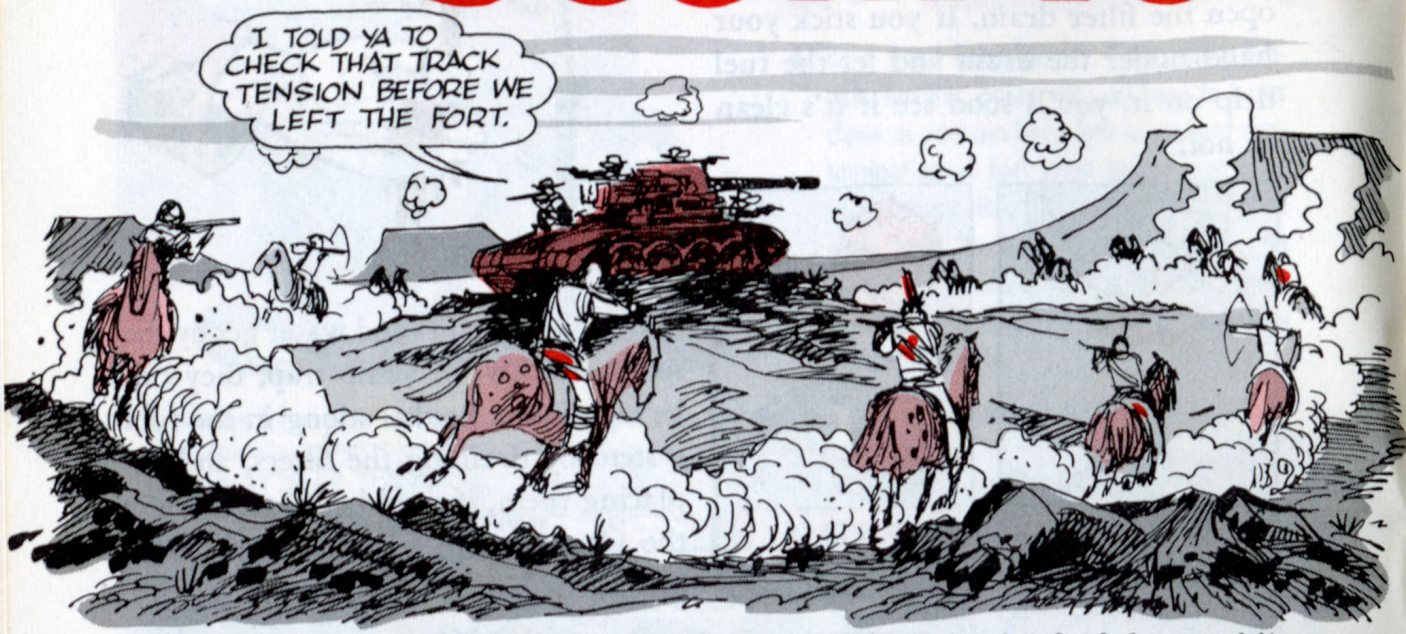
But, if your engine poops out entirely, chances are you've had it where water in the fuel is concerned. This indicates that the trap and filters haven't been drained regularly . . . that they filled up and water got into the fuel injection valves and pumps.

About all you can do in a case like this is to drain the entire fuel system . . . from the tank to the engine, including the fuel filters, to get rid of the water.

This water is especially dangerous in very cold weather, since it may freeze in the fuel injection pumps and valves and block 'em up. Result? Goodbye fuel system!

IF YOU'RE HAVING SOME SPAT SPUTTERINGS, THIS'LL KEEP YOU UP ON THE LATEST . . .

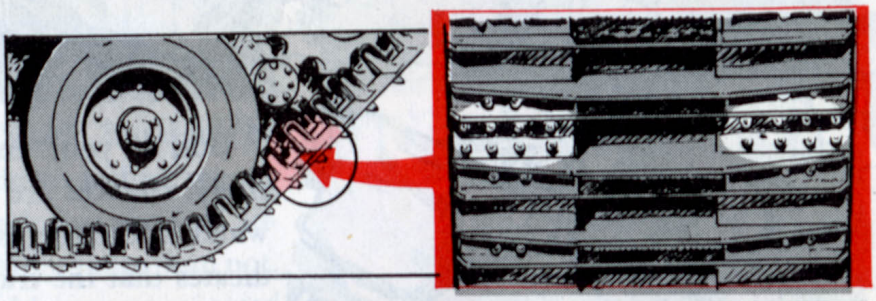
SCORPION

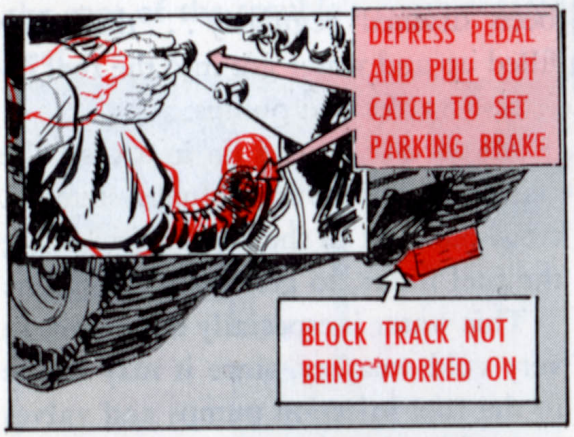


Now that your M56 90-mm SP Scorpion has been in the field for a while some of its kinks have come to light. Here're the latest:

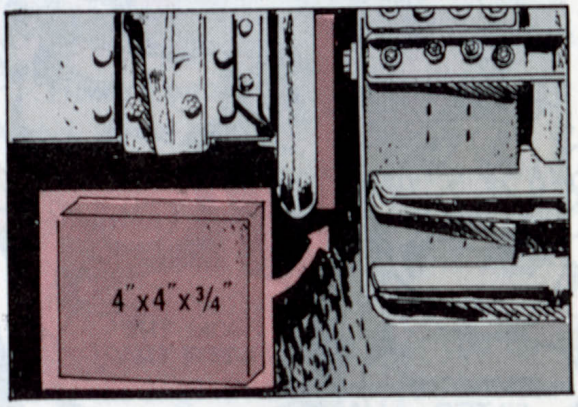
TRACK REMOVAL

1. Drive or tow your M56 on level ground until the track splice plates are between the drive sprocket and the front road wheel.





2. Put on your parking brake and block the track you're not working on.



3. Put a block of metal—about 3/4 inch thick and 4 inches square between the spindle retaining bolt and hull.

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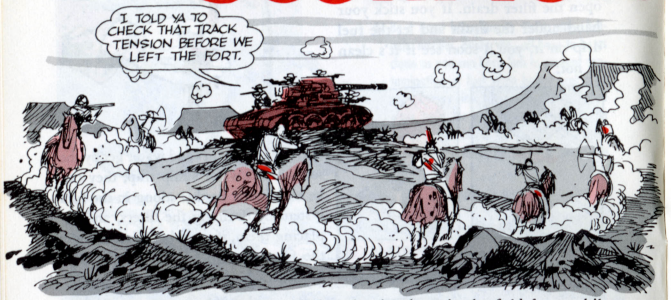
SCORPION SCOOP



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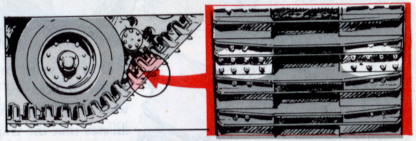

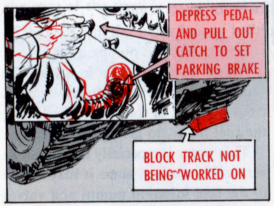

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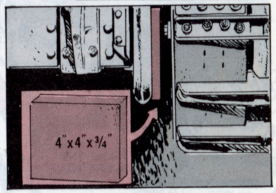
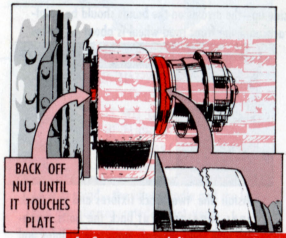
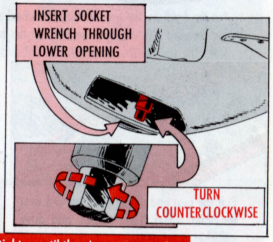


3. Put a block of metal—about ¾ inch thick and 4 inches square between the spindle retaining bolt and hull.

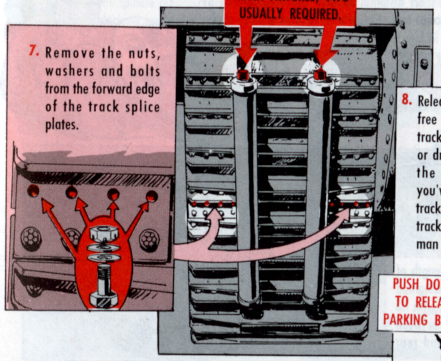
4. Loosen the spindle retaining bolt until the bolt head is up against the block and the locking teeth on the spindle and lock ring have separated about ⅛ inch.



5. Loosen the track by turning the idler spindle adjusting worm shaft. Turn counterclockwise until you get enough slack in the track.



6. Set up two track fixtures on track and tighten until there's no more tension at the track splice plates. If you've got a perfect set-up for this job, one track jack can be used if it's positioned directly in the center of the track.

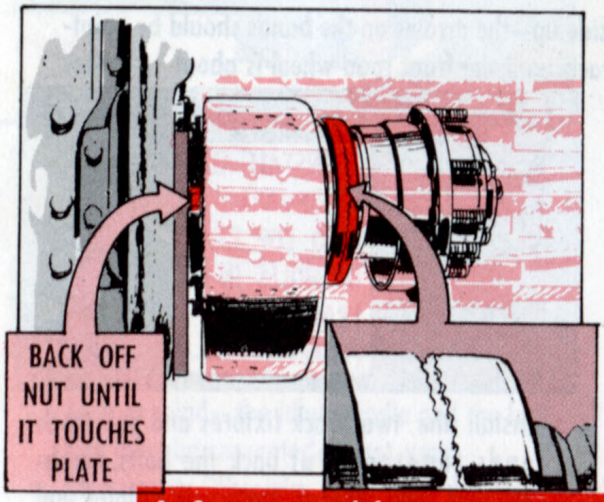


7. Remove the nuts, washers and bolts from the forward edge of the track splice plates.

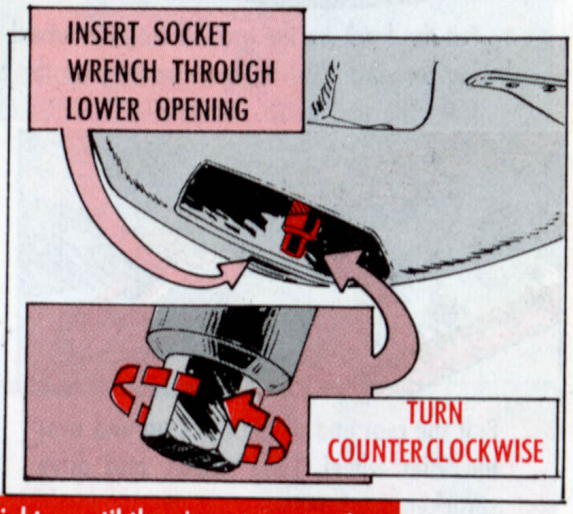
8. Release the parking brake to free the sprocket and pull the track to the rear of your M56 or drive in REVERSE to remove the track—o'course, after you've unblocked the other track. Remember though—the track is heavy and it's a two-man job to remove it.

SCOOP

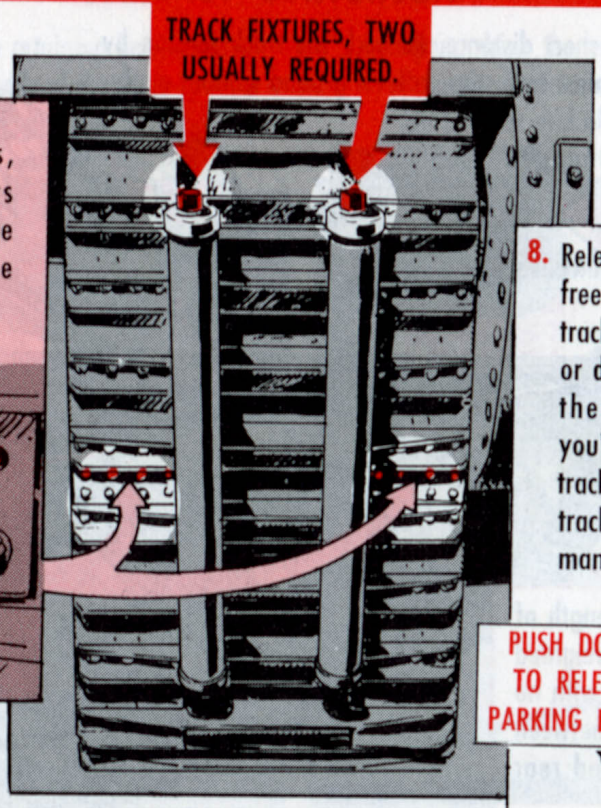
4. Loosen the spindle retaining bolt until the bolt head is up against the block and the locking teeth on the spindle and lock ring have separated about 1/8 inch.



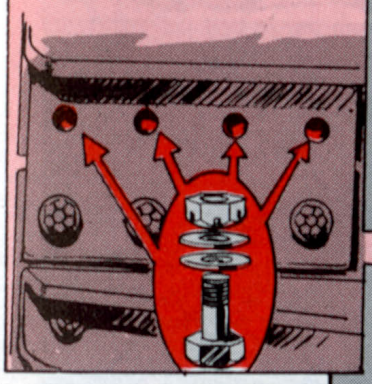
5. Loosen the track by turning the idler spindle adjusting worm shaft. Turn counterclockwise until you get enough slack in the track.



6. Set up two track fixtures on track and tighten until there's no more tension at the track splice plates. If you've got a perfect set-up for this job, one track jack can be used if it's positioned directly in the center of the track.

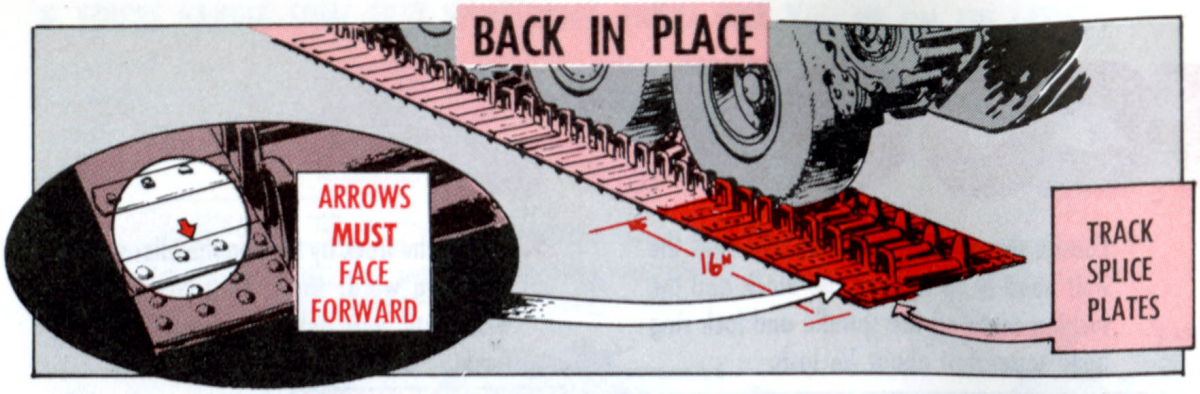


7. Remove the nuts, washers and bolts from the forward edge of the track splice plates.

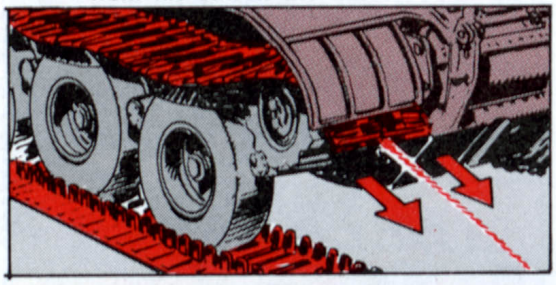


8. Release the parking brake to free the sprocket and pull the track to the rear of your M56 or drive in REVERSE to remove the track—o'course, after you've unblocked the other track. Remember though—the track is heavy and it's a two-man job to remove it.

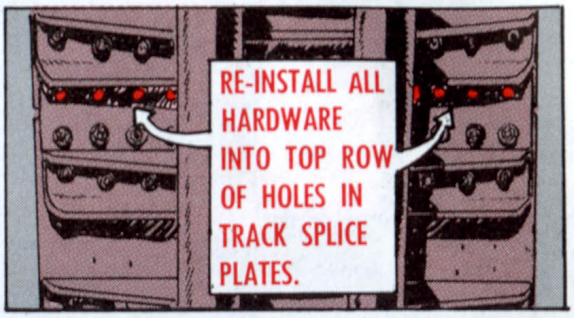
BACK IN PLACE



1. Put the track on the ground with the wheel side up—the arrows on the bands should be pointing forward. Push or tow the M56 on the track until the front road wheel is about 16 inches from the end of the track.



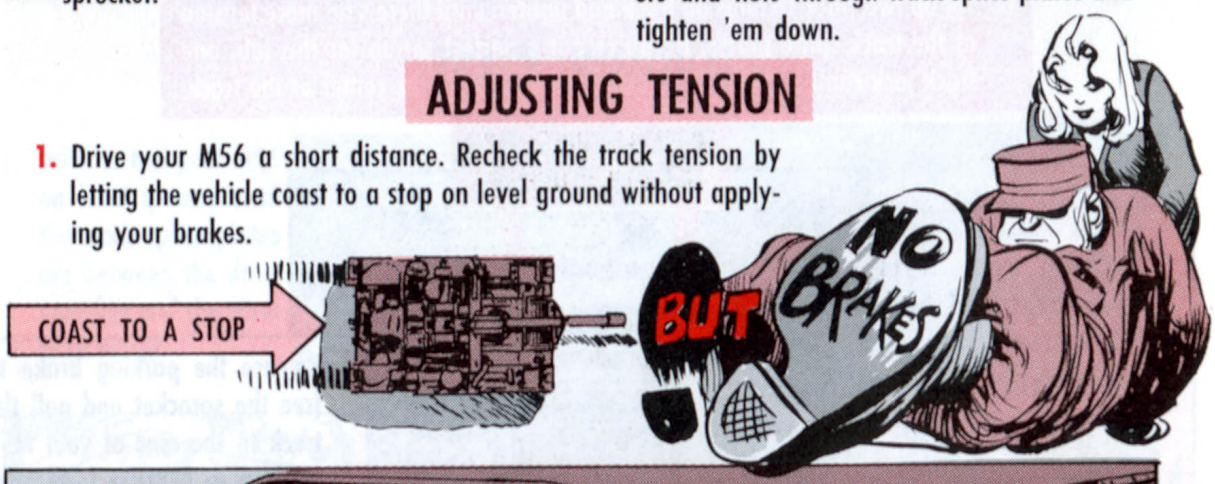
2. Pull the rear end of the track up and over the idler wheel, road wheels and drive sprocket.

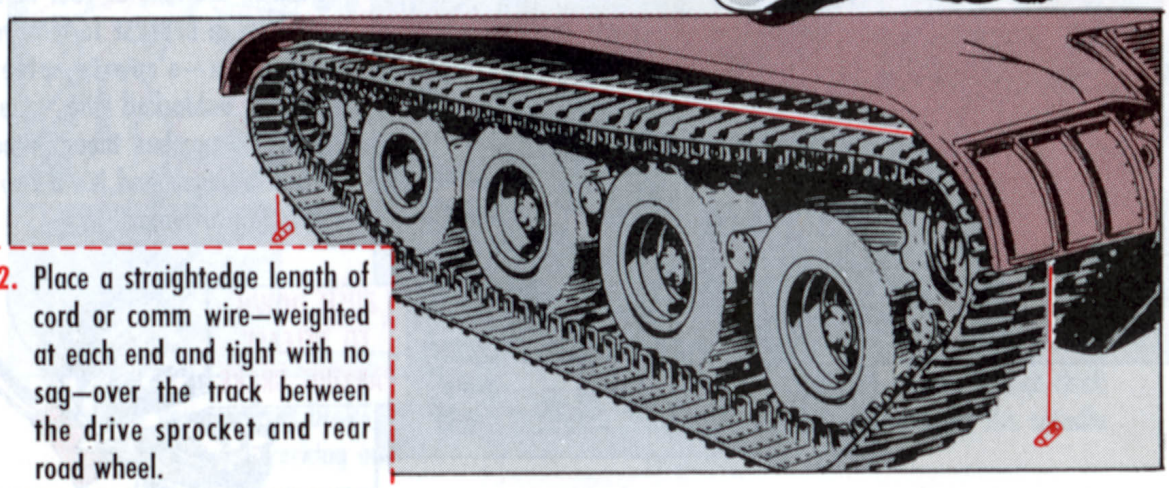


3. Install the two track fixtures and pull track ends together. Put back the bolts, washers and nuts through track splice plates and tighten 'em down.

ADJUSTING TENSION

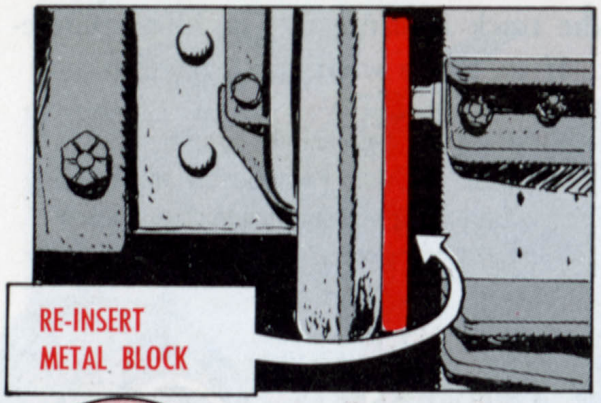
1. Drive your M56 a short distance. Recheck the track tension by letting the vehicle coast to a stop on level ground without applying your brakes.

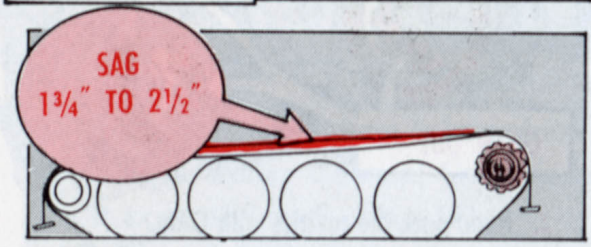




2. Place a straightedge length of cord or comm wire—weighted at each end and tight with no sag—over the track between the drive sprocket and rear road wheel.

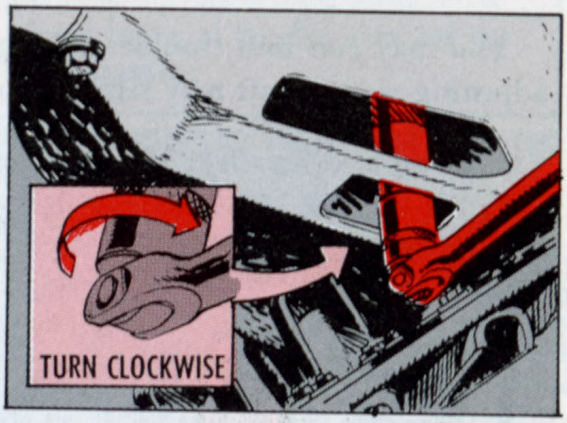
3. Get your right track tension: Again insert the 4x4-in metal block between the spindle retaining bolt and hull.





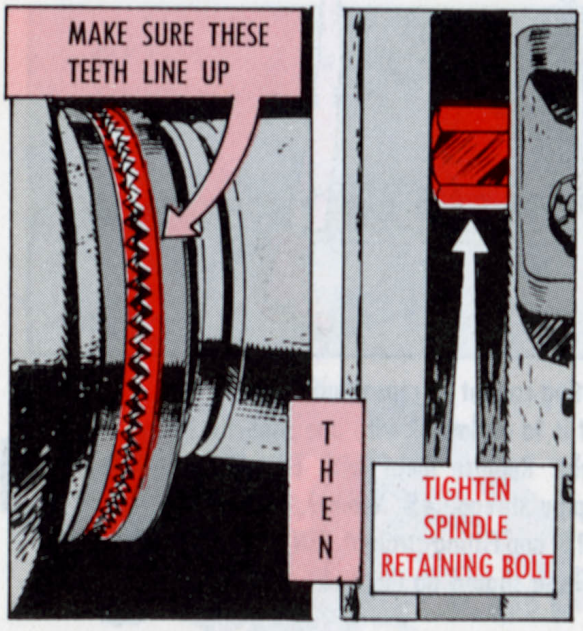
Keep in mind—the idler spindle and the lock ring must be separated to get your adjustment. Otherwise, you won't be able to turn the idler spindle adjusting worm.

Then by turning the idler spindle worm shaft in a clockwise motion . . .

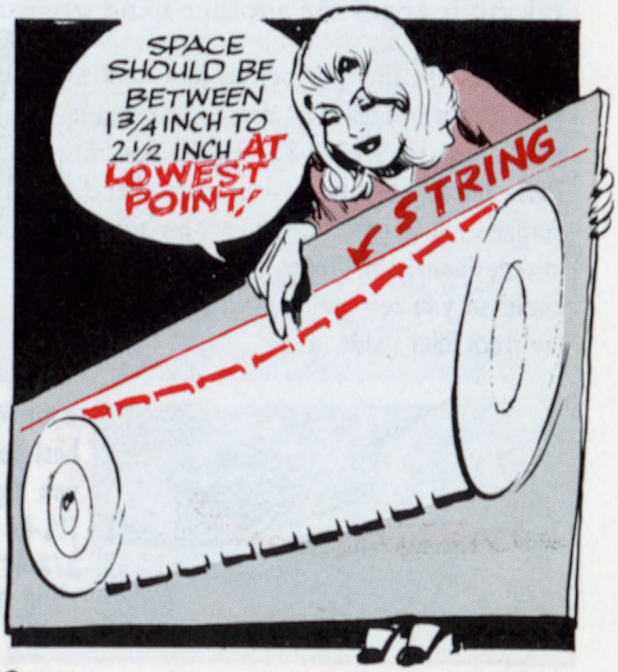


. . . until the track sag—measuring from between the bottom of the straightedge and top of lowest point of the track section—is between 1¾ to 2½ inches.
Not only that, make sure the sag measures the same on both sides.

4. Tighten the spindle retaining bolt, making sure the locking teeth of the idler spindle are lined up to engage the teeth on the locking ring.



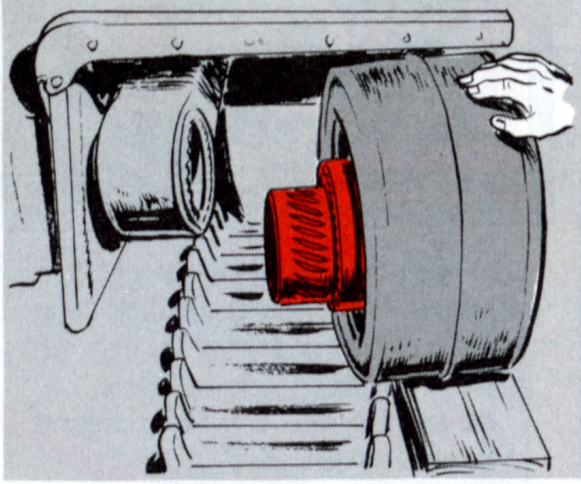
5. Again, drive the vehicle a short way and check the track tension to make sure you've come to the end of the line.



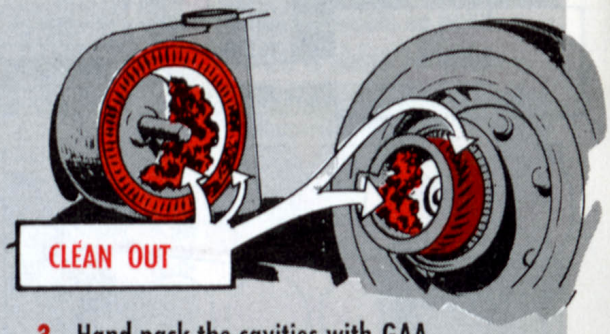
GREASE IT

You may run into trouble making the track adjustment. The idler spindle-adjusting-worm shaft may seize or bind. If so, here's what you'll have to do:

1. Take out the idler spindle from the housing.

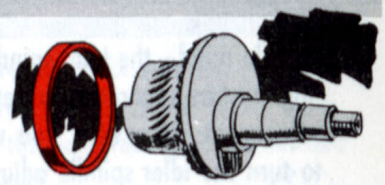


2. Clean the area and get rid of any rust or gook. (Moisture has probably gotten into this area or maneuvering in sloppy terrain has made a mess.)



3. Hand pack the cavities with GAA.

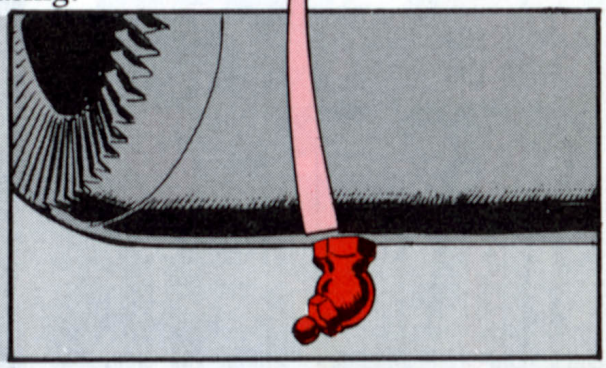
Now about the idler spindle seal, FSN 2530-571-6657 . . . At first, it was thought this seal was causing the adjusting mechanism to bind. Now it's known the lack of grease did the dirty work. You don't need the seal any more . . . take it off and forget about it.

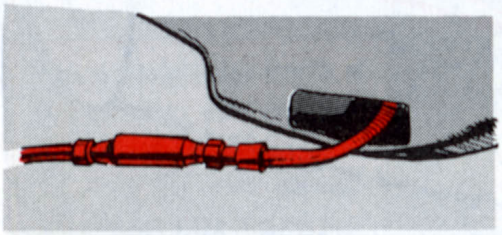


HIDDEN LUBE PLAY

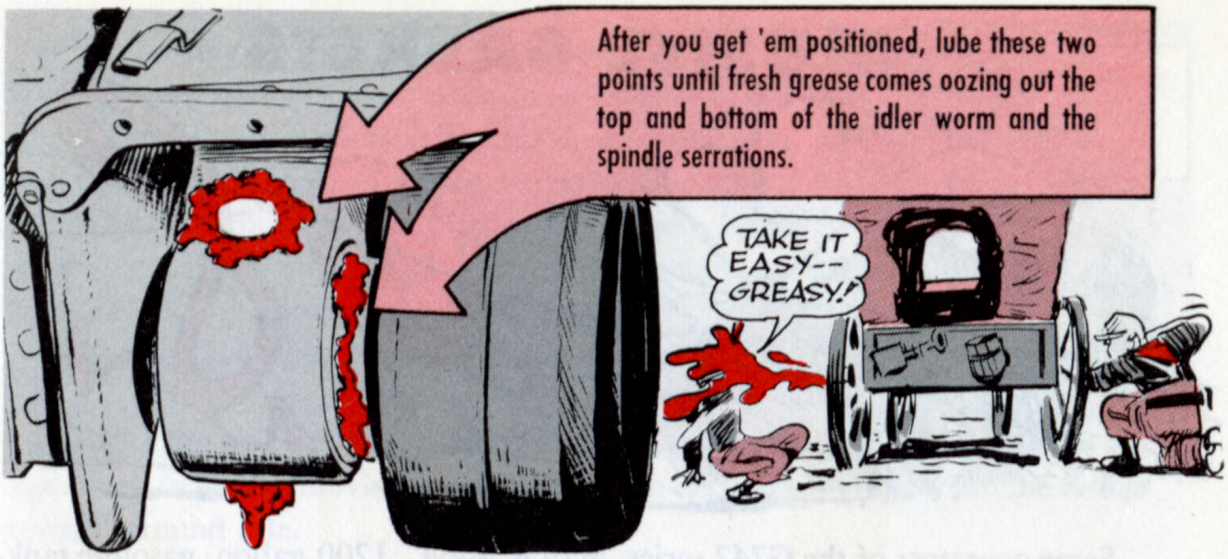
Another good maintenance tip has to do with the adjusting mechanism. The adjusting mechanism has to be kept lubed so you won't have to be bothered taking it apart for another hand greasing.

There's a lube fitting about an inch back of each idler worm bolt that doesn't show up in the TM's or LO 9-2350-213-10 (10 Apr 58). These fittings may be positioned so that it's darned hard to get a grease gun on 'em. Try to reposition both fittings so they'll face inboard so you can get at them easy through the track idler guide.





If the fitting cannot be repositioned, then your best bet is to replace it with one that can do you right. Replace them with Elbow, pipe (1/8-in pipe thread, 45° elbow), FSN 4730-278-4216, and Fitting straight, FSN 4730-050-4208. These should do the trick.



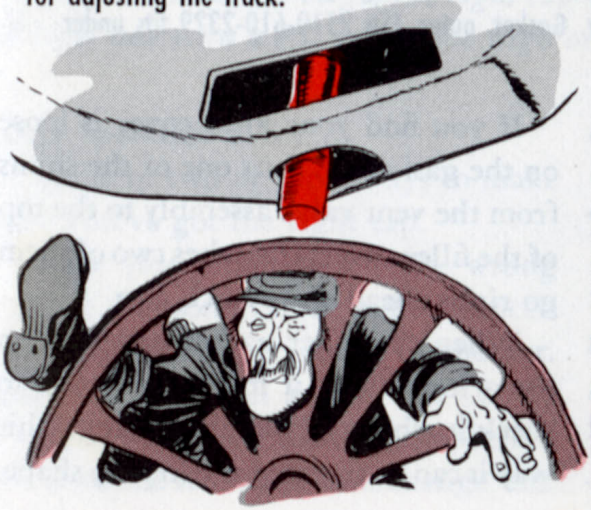
From now on hit these lube points at the mileage and time periods or after "Operation Under Unusual Conditions," same as for the other grease fittings, like it says in Note 5 of the LO.

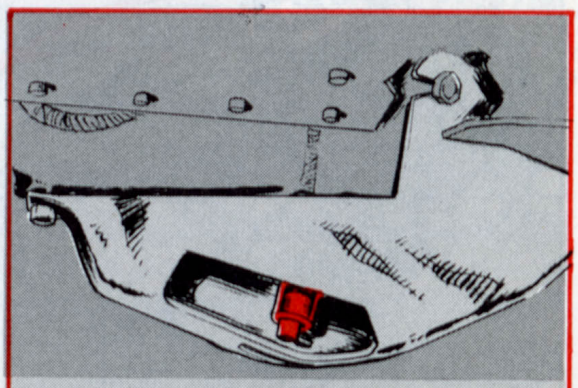
IDLER GUIDE CUT-UPS

There's one other spot in the same area that might be giving you a hard time—the idler track guide.

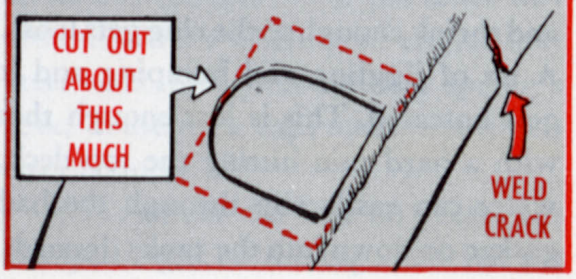
If your M56 has been in the field for any length of time and been bounced all over the place . . . the close-fitting track idler guide probably has been dented or bent.

Then chances are that there isn't enough room to work that 7/8-in socket wrench up through the track adjusting worm bolt's access hole for adjusting the track.

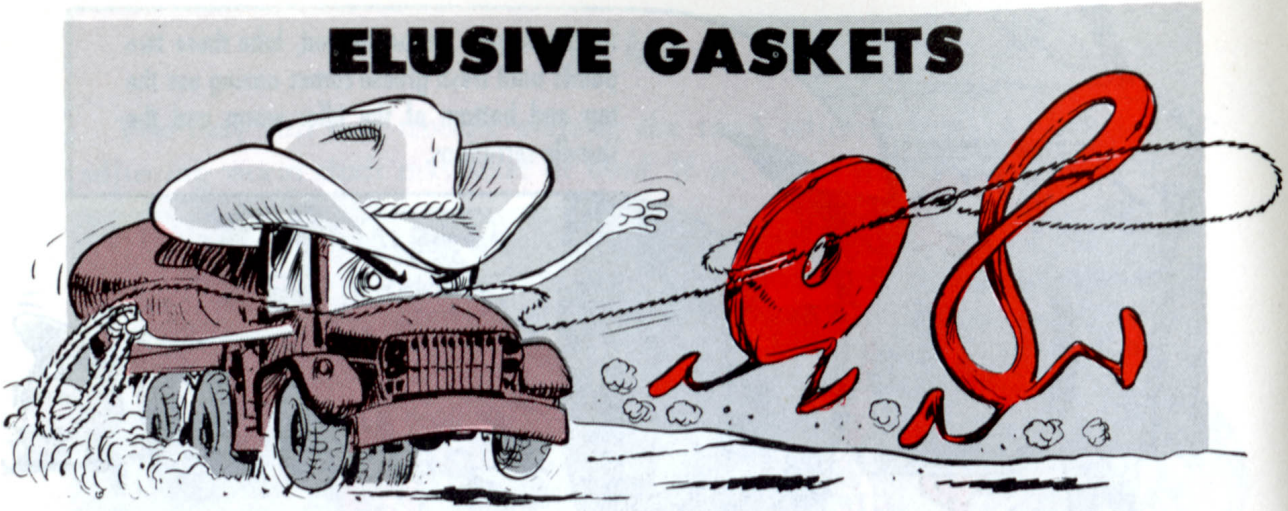




As long as you've got the guide off to do that lube job . . . take a look-see if the idler guide bolt's access hole is out of line with the adjusting bolt. If it is—cut the hole a little bigger so your wrench'll be able to slip through. Also, you might check the guide for breaks or cracks —and weld any you find.

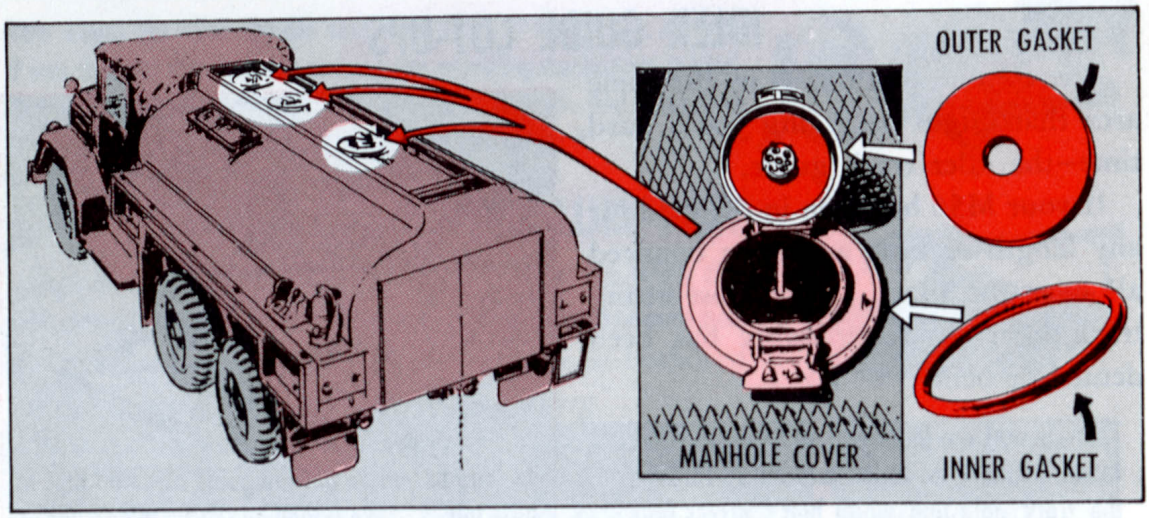


ELUSIVE GASKETS



Some operators of the G742 series, M49 & M49C, 1200 gallon, gasoline tankers have been askin' how to get and install the gaskets used on the (Tyona, late type) manhole covers . . . the ones with a ring assembly on 'em.

First of all, they can't be found in the -20P's for the vehicle, but they do have FSN's and are available to all -20P users.



The Gasket, Inner, comes under FSN 2590-627-8312. This is the large gasket used on the manhole cover and held tight by the ring assembly. Gasket, outer, FSN 2510-610-2329 fits under the filler cover.

Gotta keep your eye on the gaskets, 'cause strange things can happen to 'em, 'specially the inner one. It can dry up and shrink enough so the ring gets loose. A bit of jiggling and bumping and it gets unseated. This is just enough that with a hard rain hitting the top deck, water can easily slip through the bad gasket on down into the tanks innards.

If you find your filler cover is loose on the gasket . . . shift one of the shims from the vent valve assembly to the top of the filler cover. If it takes two of them go right ahead and switch two.

When the inner gasket has been on for a long time, it might be better to check it when tightening the ring. This way it can be reseated and kept in shape.

When putting on the new gasket (inner) or if the old one has to be reseated make sure the outer edge (all the way 'round) mates with the outer edge of the manhole cover. And before putting the ring on, smear some GAA inside the "V" ring. This way the ring won't shift to one side when drawn up so's to curl the gasket. Tap the ring with a hammer (not hard) so it won't hang up any place.

If the ring hangs up, that's just the spot where the gasket'll leak.

Along with making sure your gaskets are leak-proof there's the small, but important, item of removing the two front top-deck drain plugs when the tanker is sittin' around idle.

They're taken out to keep water from a real heavy rain from going over the cover top and down thru the breather vent.

Now when the tanker goes out on another haul, the plugs get put back in again. Can't afford to have the gas spillage running on down in the exhaust area.

Keepin' the water outta those gas tanks is your job so check the gaskets, take care of the plugs, and if necessary reposition the shims.

WATCH THE PSI

Dear Half-Mast,

All our wheeled vehicles have pressurized radiators. But, looking at the TM's, I find that the caps operate at different pressures.

How can I tell if I've got the right cap with the right PSI? And what happens if I get one with a PSI rating too high or too low?

Sp5 R.K.E.

Dear Specialist R.K.E.,

There're two or three ways to make sure you've got the right cap.

Some just won't fit on the wrong vehicle. But some can be switched, accidentally, from one vehicle to another. Caps for the 5-ton and 10-ton (G744 and G792-series) trucks, f'rinstance, are the same. So it's OK to interchange 'em.

But caps for the 5 and 10 tonners can be accidentally switched to the G742-series 2½-tonners . . . or the other way around. That's where your engine may start to boil, or your radiator spring a leak, 'cause these caps operate at different pressures.

So . . . watch the PSI on these. It's stamped right on the cap . . . 4 PSI for

the 5 and 10 tonners, 6½ to 8 PSI for the G742 deuce-and-a-half's.

What'll happen if you get the caps mixed? That's playing a guessing game but here are some clues.

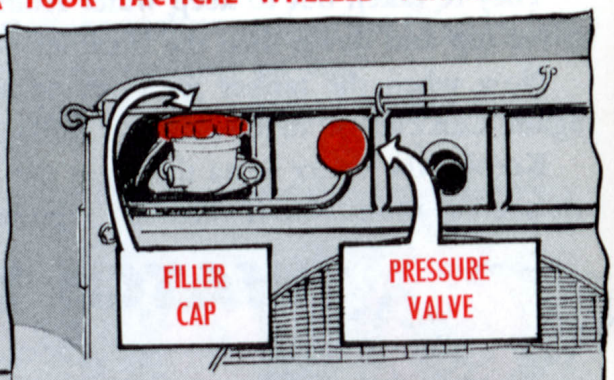
Each cooling system is made so your engine will operate at the temperature that's expected to give you the best performance. And the PSI rating of the cap determines the temperature at which the coolant will boil.

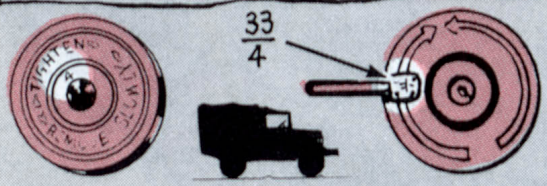
So, if you install a cap with a lower PSI rating than the radiator is supposed to get, the coolant will boil at a lower temperature causing loss of coolant which, if not corrected, will result in overheating. You're likely to boil over when climbing hills.

If you give it a cap with a rating too high, it won't boil as easy, but you'll be putting more pressure on the cooling system than it was designed for. This may cause leaks in many places, including the radiator itself.

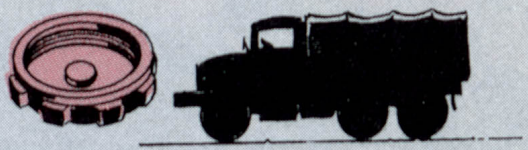
HERE'RE THE CAPS YOU NEED FOR YOUR TACTICAL WHEELED VEHICLES:

G740 and G758-series (¼-ton): Cap, filler (pressure type), 3½ to 4½ PSI, FSN 2930-737-5030. They're marked like the one shown here.

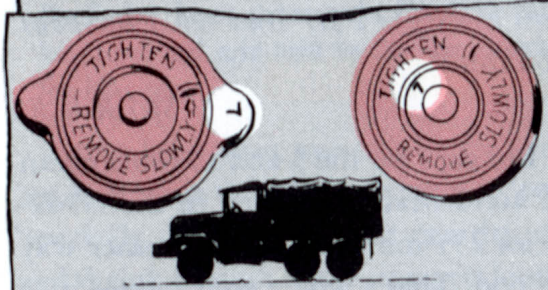




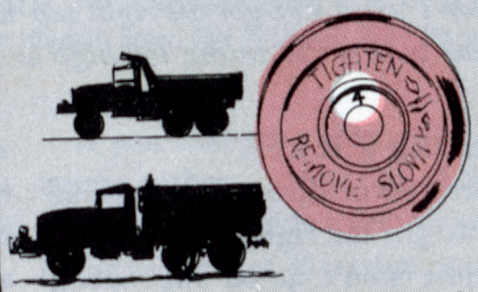
G741-series (¾-ton): Cap, radiator, filler, 3¼ to 4¼ PSI, FSN 2930-624-6293. There are two kinds and they're marked like the ones shown here.



G749-series (2½-ton): Cap, radiator, filler, FSN 2930-737-6626. (This one has a 6¼ to 7½ PSI pressure relief valve in the cooling system itself.)



G742-series (2½-ton): Cap, filler, w/chain, assy, 6½ to 8 PSI, FSN 2930-737-3365 until exhausted, then use FSN 2930-338-1005.



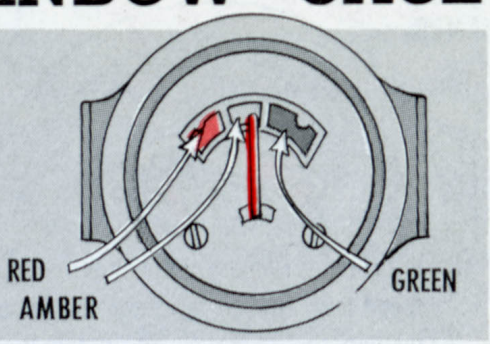
CAPS FOR 5-TON AND 10-TON TRUCKS ARE THE SAME

G744 (5-ton) and G792 (10-ton): Cap, radiator, filler, w/chain, assy (pressure type), 4 PSI, FSN 2930-741-1061.

DON'T GET THESE SWITCHED. SOME MAY FIT, BUT THEY WON'T WORK RIGHT.

Half-Mast

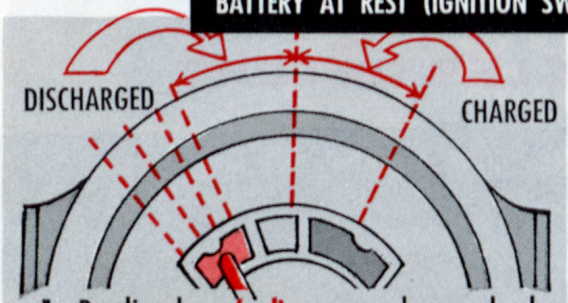
READING THE "RAINBOW" GAGE



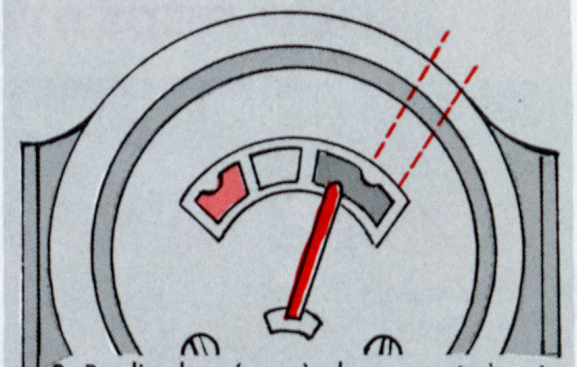
Read it right and that rainbow-colored battery-generator indicator on most of your tactical wheeled vehicles can tell you a story that may keep you from getting stalled somewhere on a dark, cold night.

These voltmeters (alias indicators) give you more info than the ammeters they've replaced . . . which told you the charging rate of the generator. Here're some things the needle and the red-amber-green colors on the indicator can tell you. (This is for the bat-gen indicator with three color-zones only.)

BATTERY AT REST (IGNITION SWITCH ON, ENGINE NOT RUNNING.)



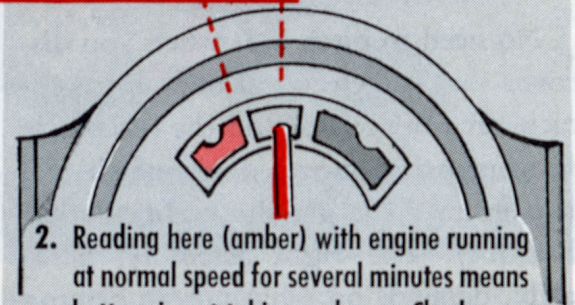
1. Reading here (red) means a low or dead battery. It could mean the vehicle's been out of action for a time, the generator undercharging, or there may be a short in the electrical system. Charge the battery. If the needle stays on red, check with hydrometer and low voltage circuit tester to see if the battery's worn out or defective.



2. Reading here (green) when generator's not putting out, means the battery was recently charged at a high rate or a defective voltmeter. It could mean the color zones are a bit out of line, so don't tear your shirt.

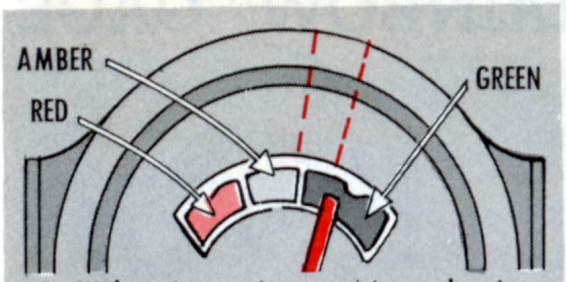
BATTERY IN USE (CHARGING OR UNDER STARTER LOAD):

1. Reading here (red, under starter load) means that the battery is low or starter load is too high, like when you're starting in cold weather.

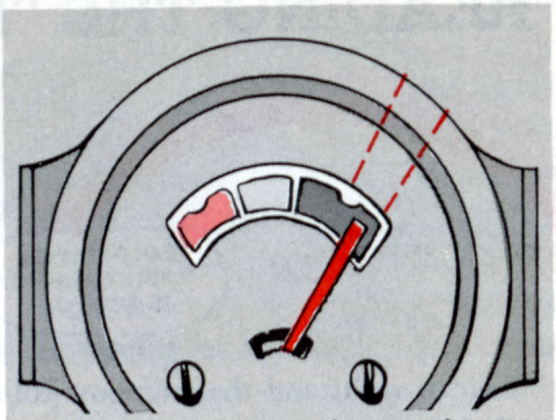


2. Reading here (amber) with engine running at normal speed for several minutes means battery is not taking a charge. Check generator (or alternator) output. If it's OK, check voltage regulator.

MORE



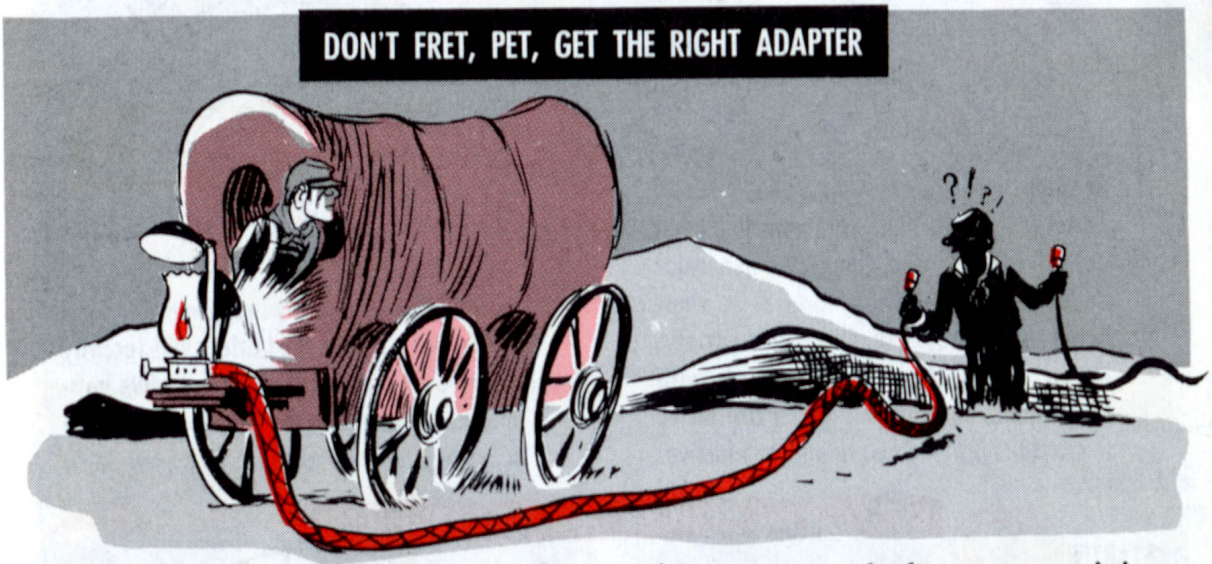
3. With engine running at maximum charging speed long enough to charge the battery, reading should stay in the green (about at the white dot) with all electrical accessories ON. If it doesn't, voltage regulator is set wrong or battery is low.



4. Reading here means voltage regulator is incorrectly adjusted or defective.

If you suspect the generator (or alternator with the 100-amp system) is defective, check it out with the Low Voltage Circuit Tester, FSN 6625-092-9136, and Adapter Set, FSN 4910-356-7511 or FSN 4910-348-7600. You'll find instructions with this tester.

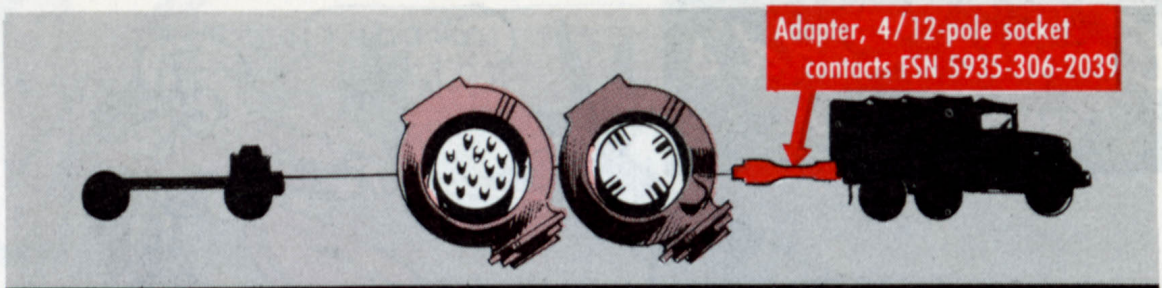
YOUR RECEPTACLES DIFFER?



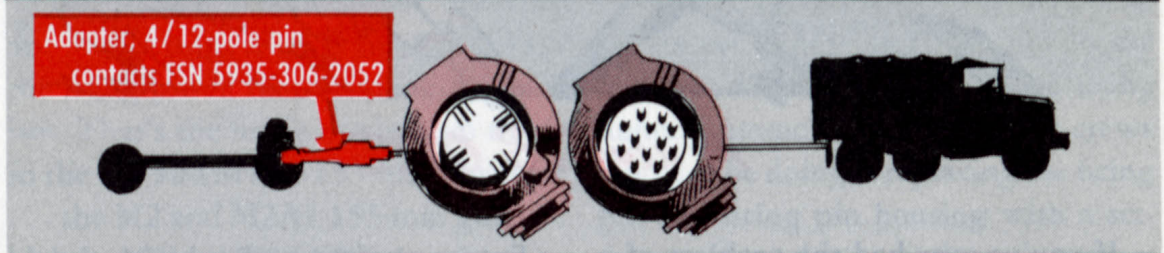
No need to pitch a fit when you discover that the electrical hookup receptacle on your trailer and the receptacle on your prime mover don't match. All you gotta do is get the **right** adapter assembly. The **right** assembly, naturally, depends on what you're driving and towing.

TB Ord 616 told operations and maintenance people the story on mixing electrical systems way back in August 1956. Today, aside from searching elsewhere for the adapter's FSN's, you can still go to the TB for help on electrical connections for towing.

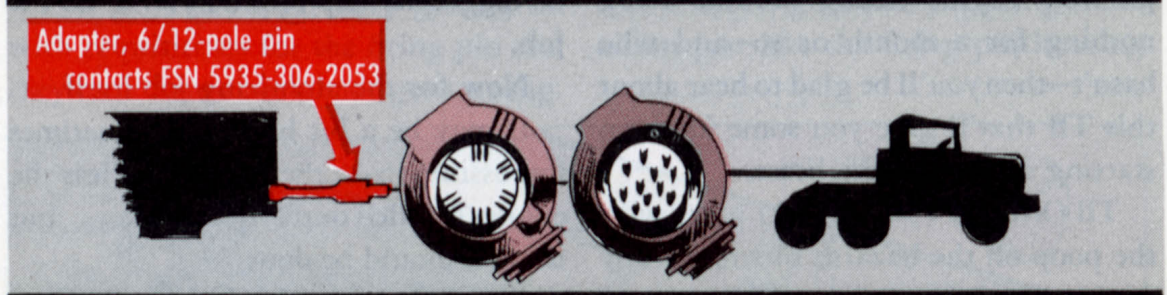
From the list below you can pick out the FSN for the adapter you need, and also learn how each hooks up to what.



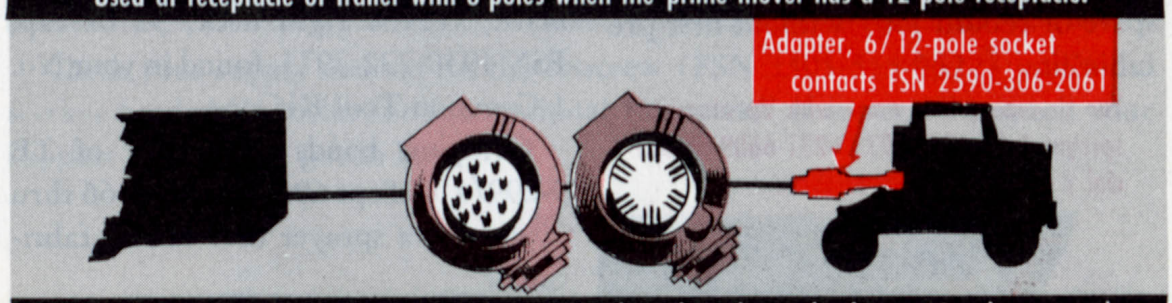
Used at receptacle of prime mover having 4-poles when trailer has 12-pole receptacle.



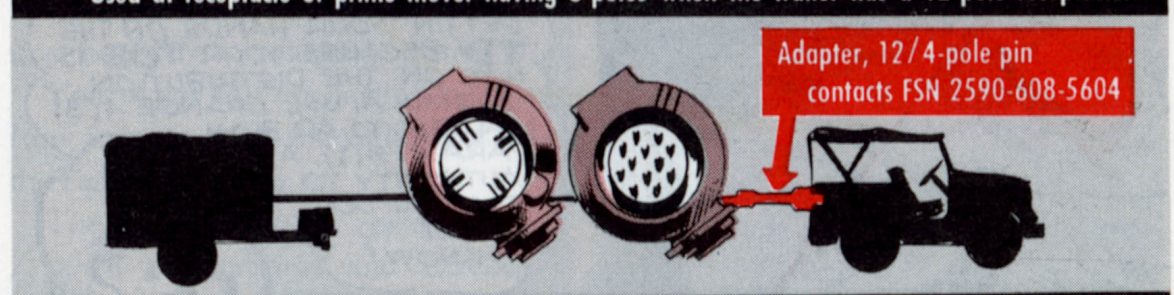
Used at receptacle of trailer having 4-poles when the prime mover has 12-pole receptacle.



Used at receptacle of trailer with 6-poles when the prime mover has a 12-pole receptacle.



Used at receptacle of prime mover having 6-poles when the trailer has a 12-pole receptacle.

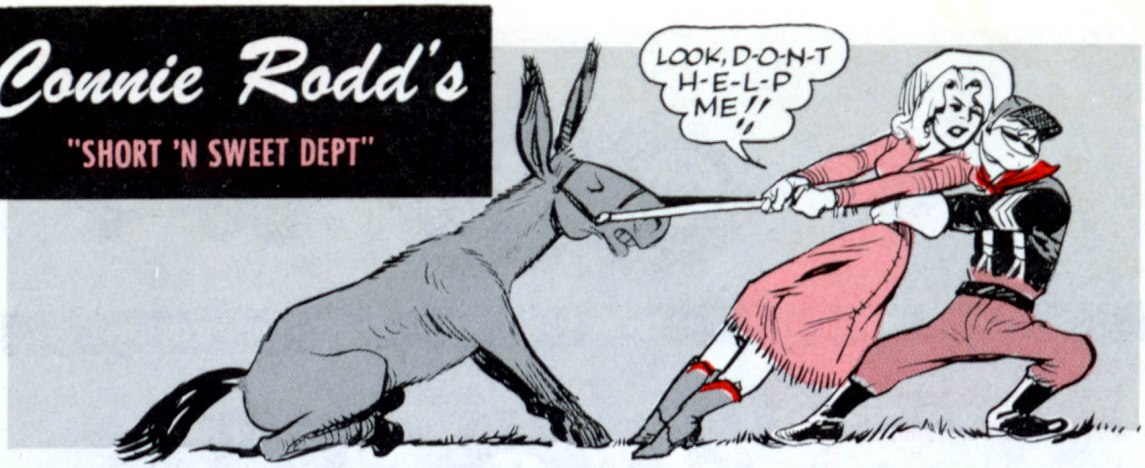


Used at receptacle of prime mover having 12-poles when towing a trailer with permanently attached 4-pole cable.

Also make a strong mental note of this very important, and often neglected, towing tip—be sure to change light bulbs on the trailed vehicle to match the voltage of the prime mover.

Connie Rodd's

"SHORT 'N SWEET DEPT"

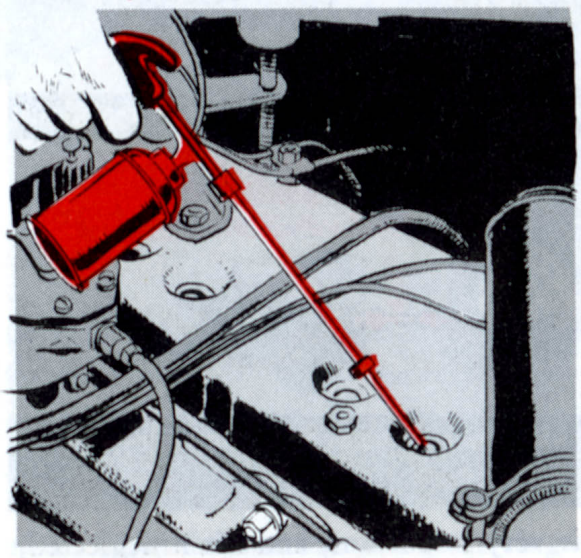


A new TB ORD

If you've ever had the problem of a gasoline engine sitting around doing nothing for a month or so—and who hasn't—then you'll be glad to hear about this TB that'll give you some ideas on starting such a cranky beast.

TB Ord 392 (30 Sept 60) gives with the poop on the hazards of startin' any engine (be it in a new vehicle, a new spare or rebuilt job) without first prelubin' it.

The prelube job is done with an atomizing sprayer. Lube oil FSN 9150-231-6689 (PL Special 1 qt can) is what you'll use.



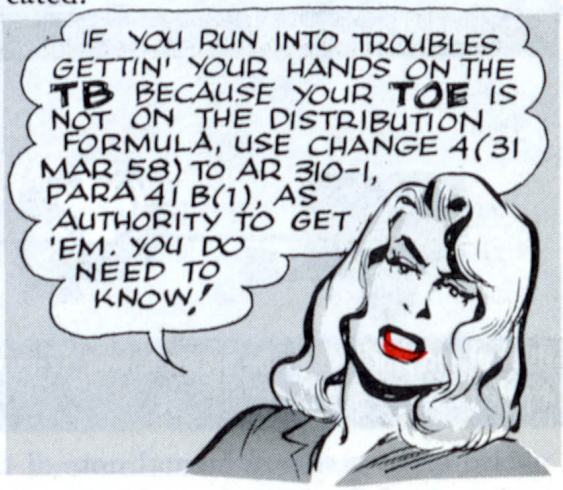
Future engines and vehicles should be tagged to help remind you to do the job.

Now for the atomizing job itself.

It may be a bit hard and sometimes impossible to do the spray job, 'less the engine's pulled outta the vehicle . . . but the job should be done.

You can either use Oil Gun, pneumatic, curved rigid neck, 32 oz cap, FSN 4930-222-2975, found in your No. 1 Common Tool Kit, or—

Get your hands on a copy of TB 9-299/1 (6 Sept 60). On pages 66 thru 70 there's a sprayer that can be fabricated.

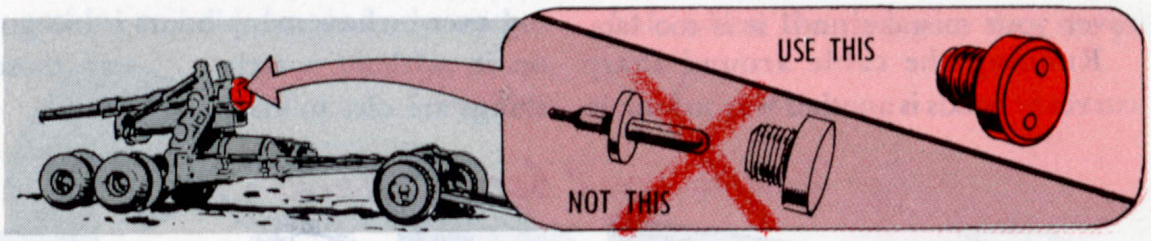


Just remove the spark plugs, and spray a coupla ounces of the oil in each cylinder . . . wait 15 minutes . . . then rotate the engine for 30 seconds.

The supply people up the line sure are wondering what's going on with the firing pin in the M1 firing mechanism. That's the firing mechanism that's in the M1 and M1A1 155-mm howitzer . . . the M2 and M2A1 155-mm gun . . . and the M2 and M2A1 8-in howitzer.

The guys in supply keep getting hit with requisitions for the firing pin and they can't figure out what's gone wrong.

What they don't know is that some outfits are using the firing pin in the firing mechanism when they're using dummy ammo. And what the crews ought to be doing is replacing the firing pin and firing pin housing with a setscrew when they use dummy ammo. The setscrew goes into the firing mechanism just like the firing pin housing.



Check your supply manual for the setscrew (FSN 5305-513-0622) under the section headed "Articles for Instructional Purposes." If it's not there, tell your support unit you've got to have it.

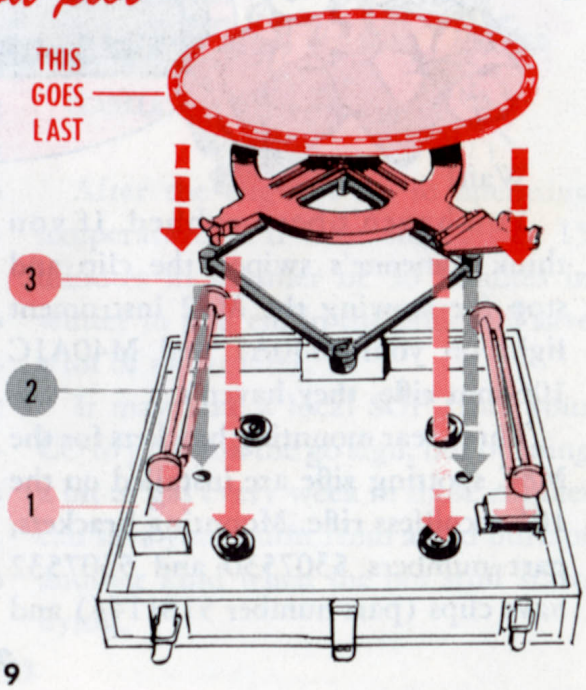
A good plot

You want to keep your M5A2 plotting board from warping—yes?

You've got half the battle won if you stow it in its chest the right way. And the right way is like so:

The legs go in first . . . next the brace . . . then the support and bracket — which goes in the lower right hand corner of the chest.

The last thing you do is put the frame with the grid disk into the four rests. This means the board will set on an even keel all the way around.

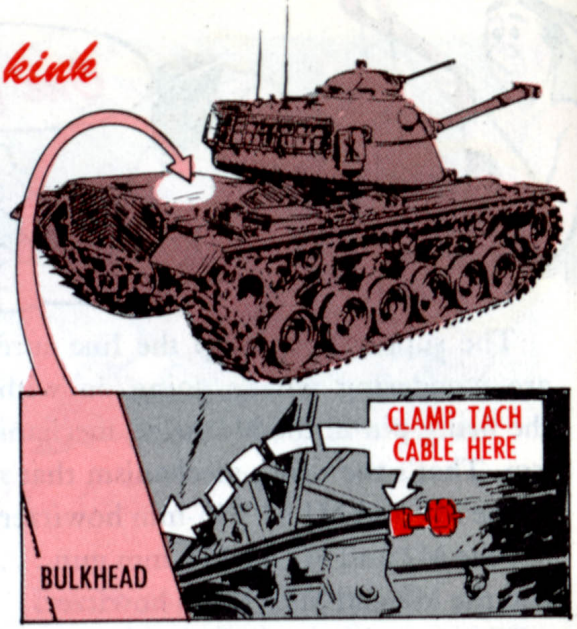


Tach kink

Some M48A2 tank crewmen have been ruining their tach cables when pulling or replacing power packs. They claim the tach cable gets snagged on the engine and then kinks. So-o-o, be sure and push it back out of the way. You'll find there's a clamp to secure it to the bulkhead near the left fuel tank.

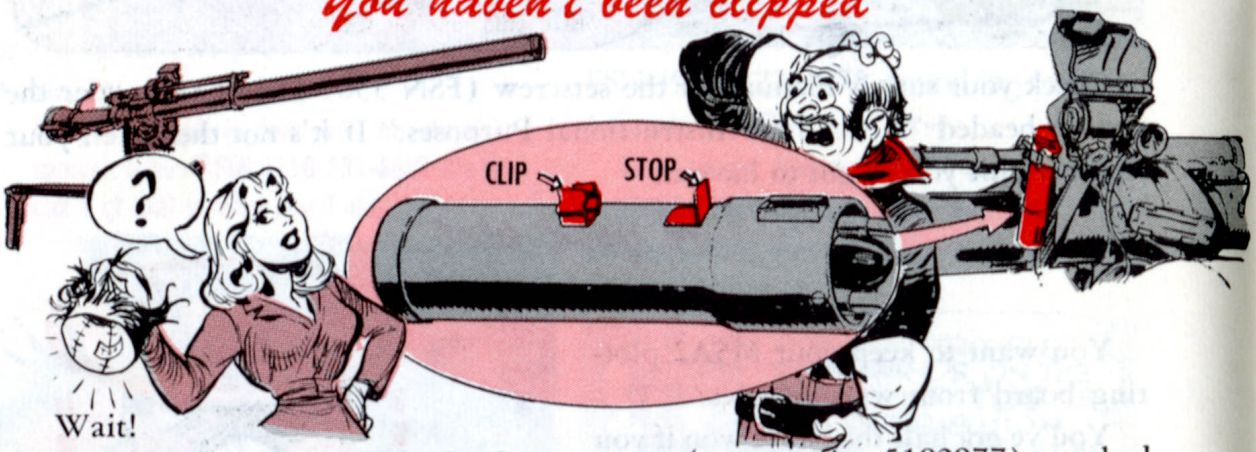
That tach is a mighty handy thing to have, so don't bust it by getting a kink in its cable. O' course what some of the guys **might** be doing is forgetting to unhook the tach cable when they pull the pack. If you do that—and it is mighty easy to do—you likely won't discover your mistake until it is too late.

Running the cable around sharp curves or bends is another way to kink it.



Like the man says, you can't tell the players without a score card, and you can't tell how fast your engine is turning over or how many hours it has got on it, without a tach . . . and those things are nice to know.

You haven't been clipped

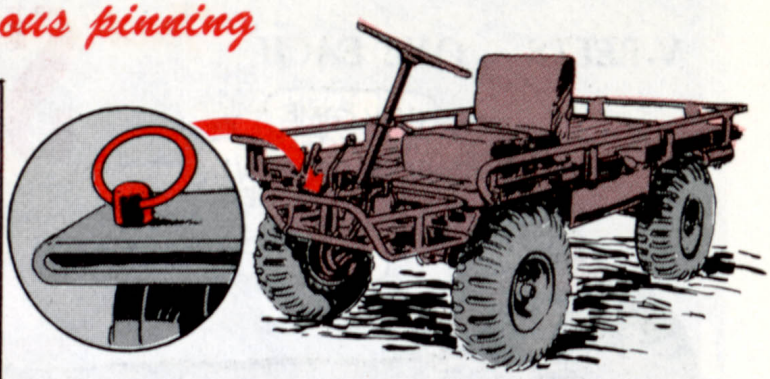


You haven't been robbed. If you think someone's swiped the clip and stop for stowing the M42 instrument light on your M40A1 and M40A1C 106-mm rifle, they haven't.

Three rear mounting brackets for the M8C spotting rifle are installed on the 106 recoilless rifle. Mounting brackets, part numbers 5307530 and 5307532 have clips (part number 5181144) and stops (part number 5182977) attached. But the latest brackets (part number 7309211) don't include the clip and stop.

Since the M42 instrument light's equipped with clip (part number 5181144) and stop (part number 5182977) you'll not need them on the mounting brackets of your spotting rifle.

Dangerous pinning



The anchor pin for pinning your M274 Army Mule in 2-wheel and 4-wheel steer can fall out if its pull ring is missing.

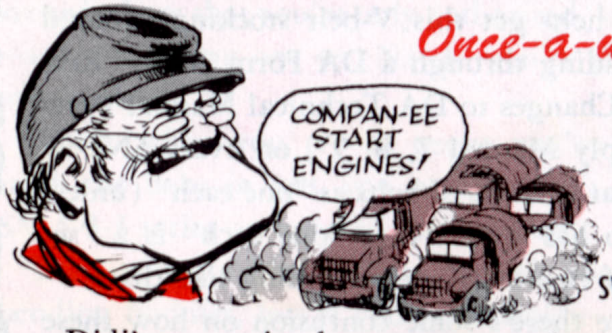
Fact is, if the pin slips through the anchor you'll have no steer . . . and anything can happen.

When the pull-ring is missing there's nothing to hold the pin in the anchor—don't end-for-end the pin, or, it'll jump out of the anchor as the spring-loaded ball is then on top of the anchor, and this isn't enough to hold the pin.

If one of your pins is missing its pull ring, weld a splotch of metal to the top of the pin.

Just be sure your weld is above the hole where the ring goes thru the pin.

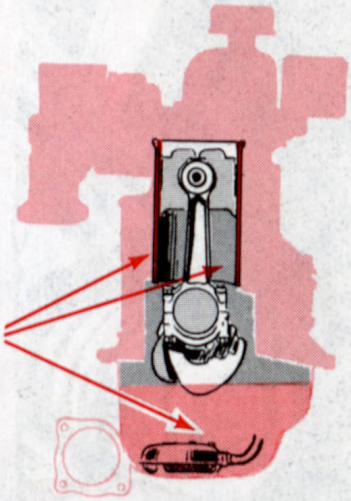
Once-a-week run



Didj'ever notice how your muscles get flabby and weak when you don't get regular exercise? Well, it's no accident.

Exercise keeps a lot o' things going 'round. And that includes the engines on your vehicles. It may not firm up their muscles, but it'll keep 'em humming a smooth tune.

Any time there's going to be a gap of more'n a week when your vehicles won't be used, the engines should get a bit of exercise once-a-week to relubricate 'em, sweep out any rust that's formed on cylinder walls and bearings, and drive out water or fuel dilution from the crankcase oil.

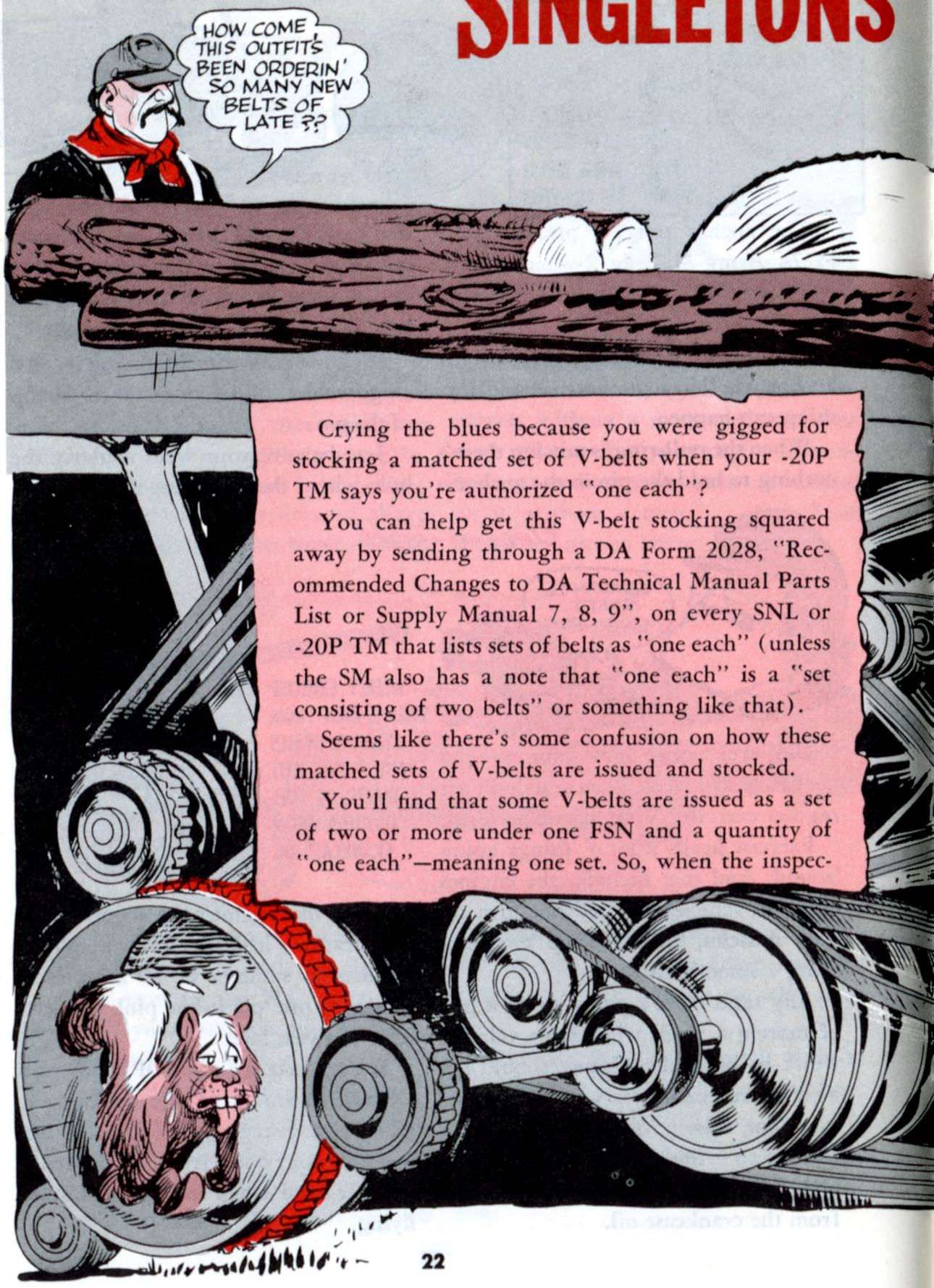


After the engine's up to operating temperature, it'll take only about 15 minutes in summer or 30 minutes in winter to put 'em in the pink and save a lot of sweat later.

It may take a local SOP from your CO to give you the go sign, but burning a bit of gas every week in those engines can save your outfit from a bad burn of another kind when the hot stuff starts flying.

V-BELTS . . . ONE EACH

SINGLETONS



Crying the blues because you were gigged for stocking a matched set of V-belts when your -20P TM says you're authorized "one each"?

You can help get this V-belt stocking squared away by sending through a DA Form 2028, "Recommended Changes to DA Technical Manual Parts List or Supply Manual 7, 8, 9", on every SNL or -20P TM that lists sets of belts as "one each" (unless the SM also has a note that "one each" is a "set consisting of two belts" or something like that).

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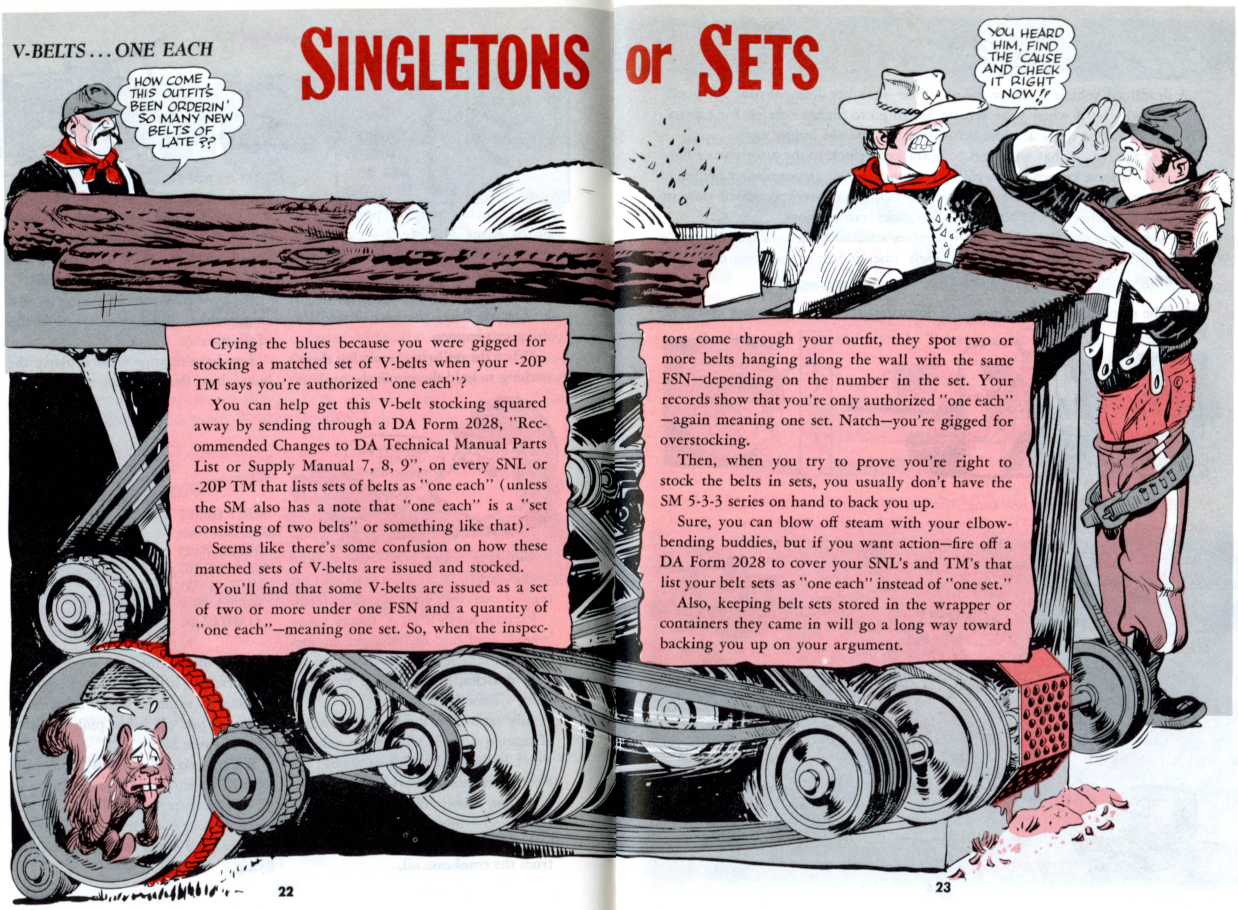
SINGLETONS or SETS



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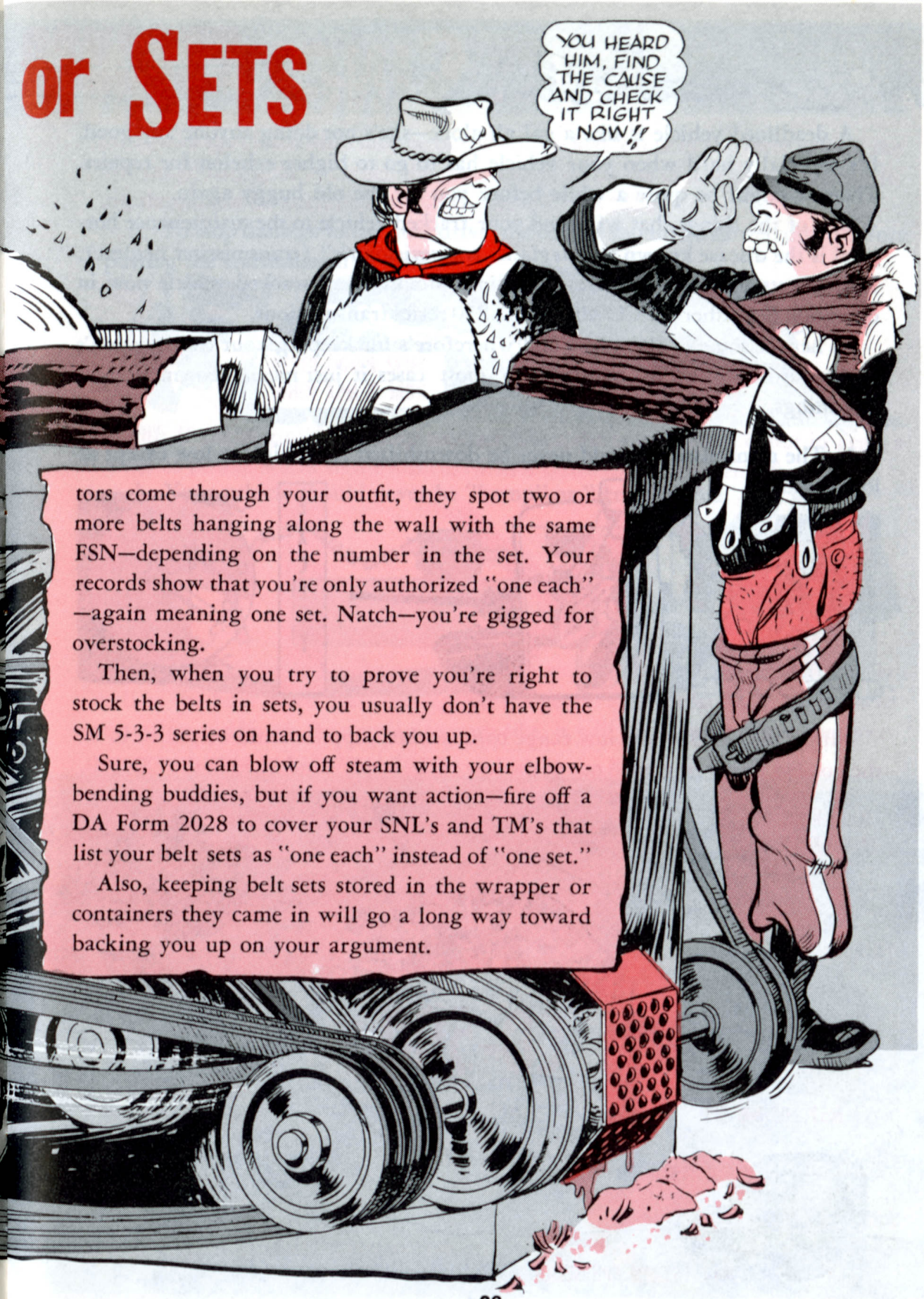
Then, when you try to prove you're right to stock the belts in sets, you usually don't have the SM 5-3-3 series on hand to back you up.

Sure, you can blow off steam with your elbow-bending buddies, but if you want action—fire off a DA Form 2028 to cover your SNL's and TM's that list your belt sets as "one each" instead of "one set."

Also, keeping belt sets stored in the wrapper or containers they came in will go a long way toward backing you up on your argument.

or SETS



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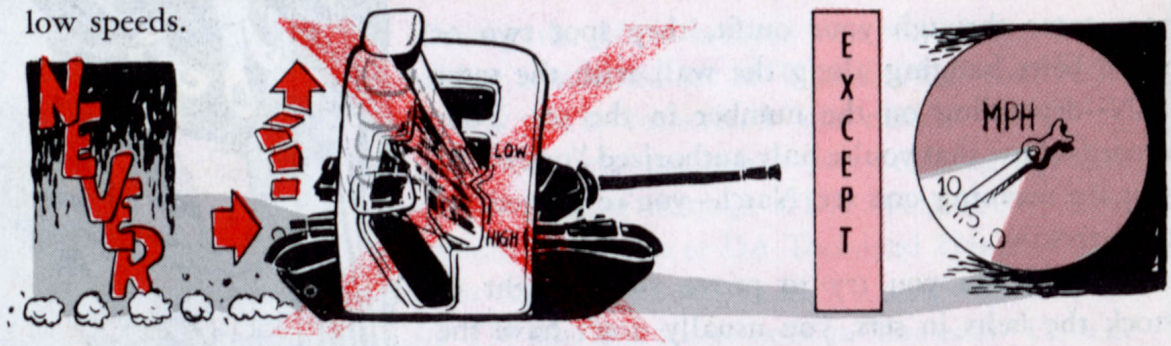
A deadlined vehicle is like a gal all alone—she's not doing anyone any good. It's especially hard when your vehicle has to go to higher echelon for repairs. Then, it might be quite a while before you see the old buggy again.

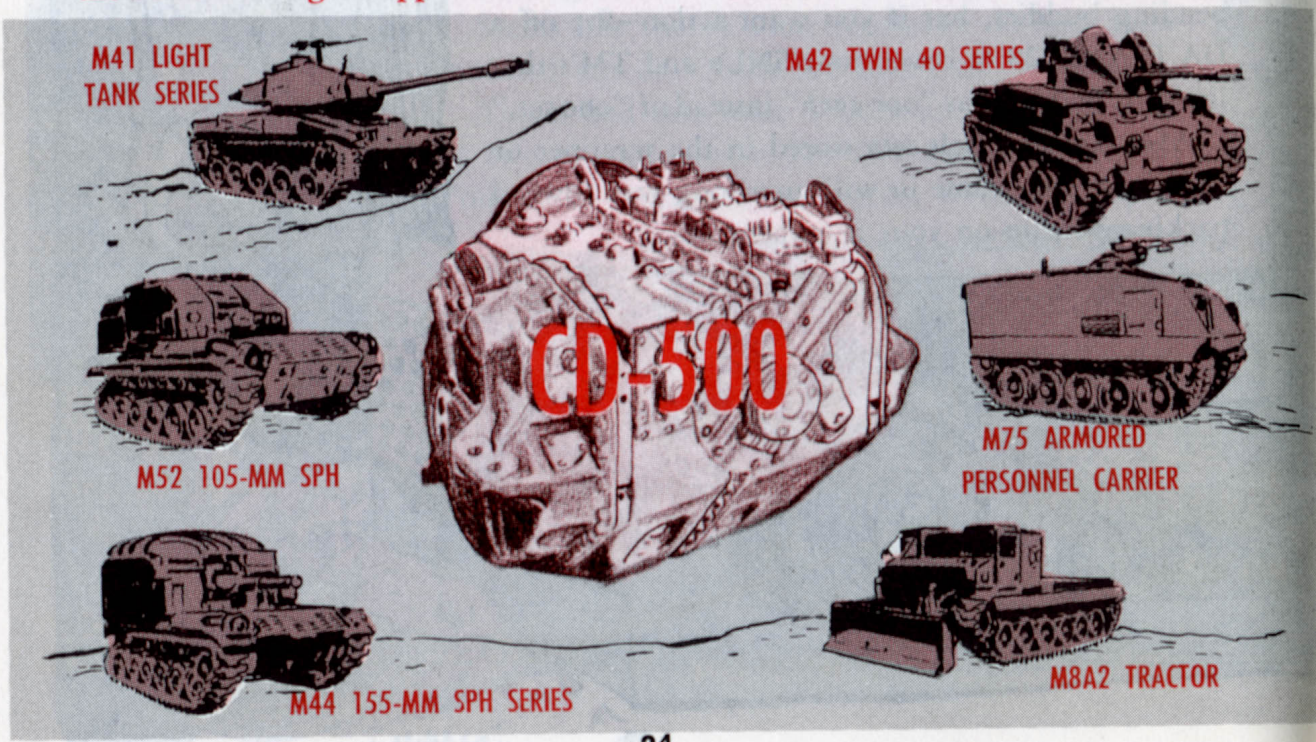
One of the things that will send your tracked vehicle to the maintenance hospital is the disease known as *"neglectis transmissonitis"* (transmission neglect). This affects most of your crewmen since almost every tracked vehicle now in operation has either the CD-500 or CD-850 series transmissions.

So here're some of the why's and wherefore's for keeping your transmission's health insurance up to par—and in most cases it just means remembering a few things.

1. The transmission should never be downshifted from high to low except at low speeds.



WHY: In the CD-850, the low range band anchor support could be pulled in or the bonded lining be ripped out of the low range apply band. And in the CD-500,



TRACKED TRANSMISSION TIPS

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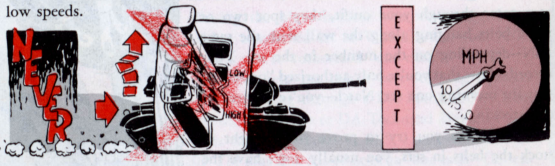
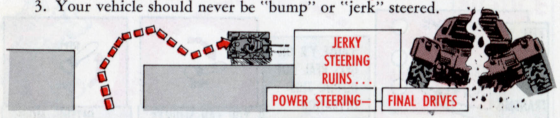


WHY: In the CD-850, the low range band anchor support could be pulled in or the bonded lining be ripped out of the low range apply band. And in the CD-500, the low range clutch discs may be burned or broken 'cause of the force behind the low range ring gear . . . when the gear is stopped by the clutch discs. Downshifting should not be attempted at speeds above 7 or 8 MPH.

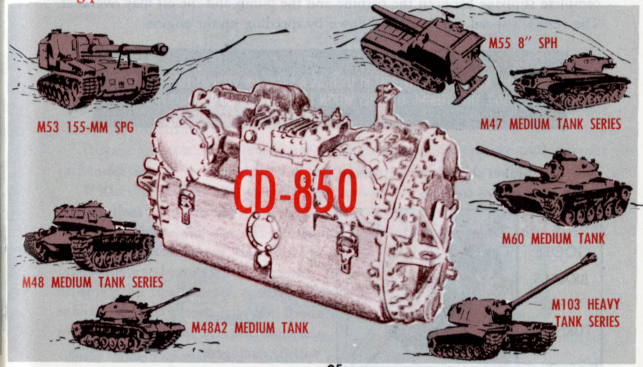
2. To stop damage to the final drive, the engine should be slowed down before putting the transmission in gear.

WHY: If the engine is running too fast when the transmission is put in gear, a surge of power is sent to the final drive and teeth may be broken off.

3. Your vehicle should never be "bump" or "jerk" steered.



WHY: If you steer in bumps or jerks, every part in the steering power flow, as well as the final drive, feels the jerk on the gears. This could cause the gears to crystallize and break. By steering smooth-like, it will give longer life to the steering power train and the final drives.



TRANSMISSION TIPS

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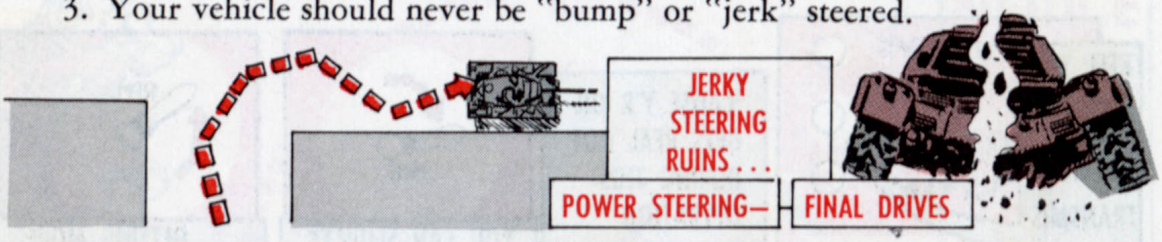

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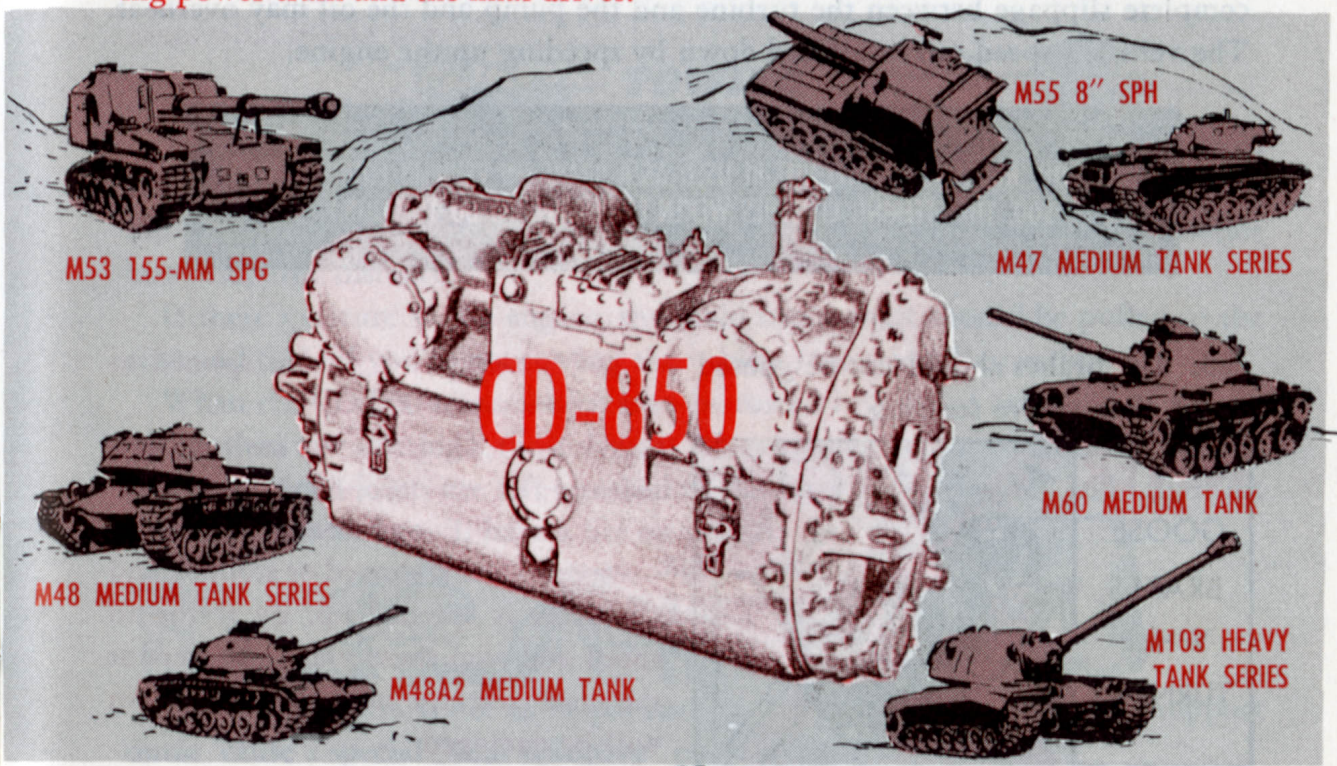
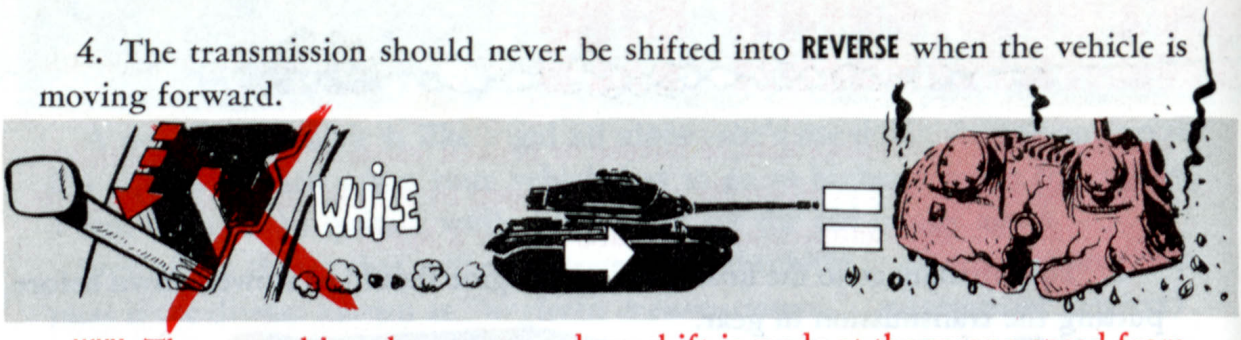


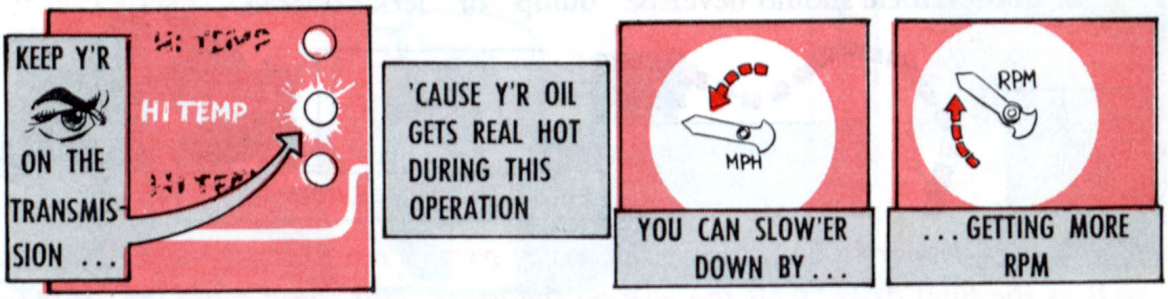
4. The transmission should never be shifted into **REVERSE** when the vehicle is moving forward.



WHY: The same things happen as a downshift is made at the wrong speed from high to low range, only it affects the reverse range band and range clutches.

Going down steep hills: Vehicles with the CD-850 can be put in **REVERSE** to help in going down a steep hill. Start your vehicle down the hill and then come to a stop. Shift into **REVERSE** and let the vehicle start down the hill.

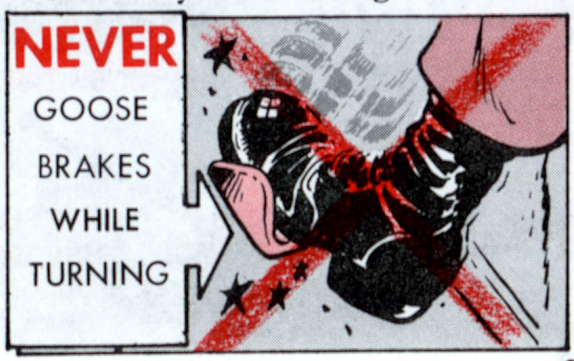
Remember that the vehicle is in REVERSE and you'll get cross steering.



Keep an eye peeled on the high oil temperature warning light since you'll have complete slippage between the turbine and the pump and the oil may overheat. The vehicle's speed can be slowed down by speeding up the engine.

(CAUTION: REVERSE SHOULD NOT BE USED AS A BRAKE ON VEHICLES EQUIPPED WITH THE CD-500. THE STEERING CLUTCHES WEREN'T DESIGNED TO DO THIS JOB.)

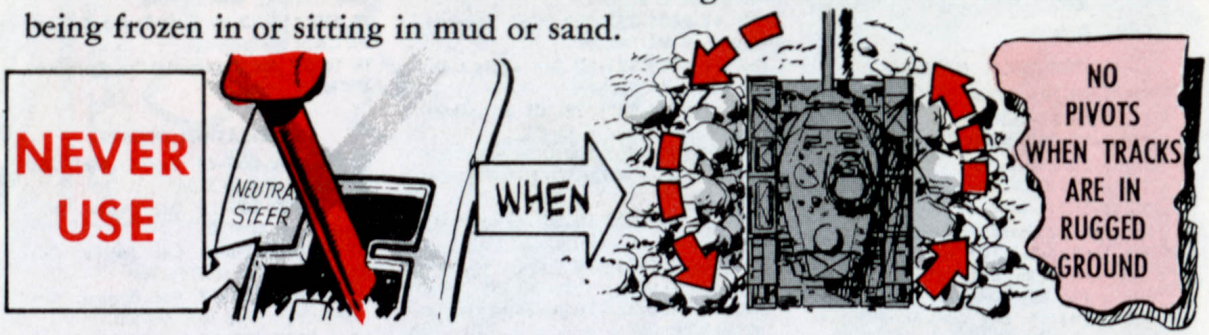
5. The brakes should not be goosed at the time you're steering.



WHY: The brake discs are splined to the output planet carriers.

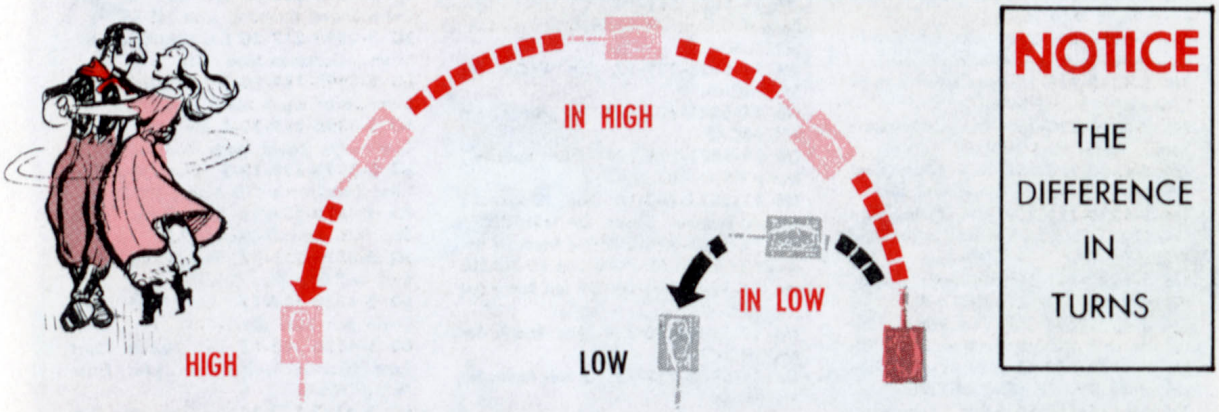
When the brakes are stepped on, these planet carriers are slowed down or stopped. When you steer, one of the planet carriers is slowed or stopped and the other is speeded up. By trying to speed and stop these planet carriers at the same time, the steering power train will be damaged.

6. Never use **NEUTRAL** steer when there's high resistance on the tracks—like being frozen in or sitting in mud or sand.

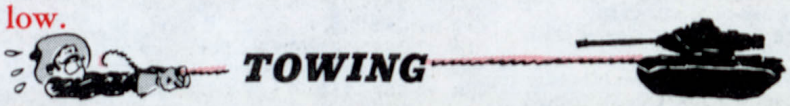


WHY: Unequal resistance on the tracks could cause failure of the steering shaft or damage the steer differential. Shift to low, apply full steer and accelerate to control movement.

7. A sharper turn can be made in **LOW** range than in **HIGH.**



WHY: The gear ratios are different, with a minimum turn in high about three times what it is in low.



When CD 850 vehicles have to be towed for a distance, the universal joints should be disconnected and tied. If there's been a transmission seizure or failure, the universal joints have to be disconnected and tied—to be towed—no matter how short the distance.

If there's seizure in the engine, the main input shaft should be pulled to the rear and tied—if you're not towing the vehicle more than four miles.

When the CD-500 transmission is to be towed because of any kind of failure (other than tow starting), the universal joints must be **removed** from the vehicle. If the universal joints are left attached to the final drive, the free end might hit the fuel tanks and you'll have a fire on your hands.

The transmission is not to be painted by anyone but your Ordnance support outfit 'cause a special "heat reflective" paint is used.

A selected list of recent publications of interest to Organizational Maintenance Personnel. This is a list compiled from recent Adjutant General's Distribution Center Bulletins.

TECHNICAL MANUALS

TM 1-1H-19A-4-20P Dec.
TM 1-1H-21-4-20P Jan.
TM 1-1H-23A-4-20P Dec.
TM 1-1H-23C-6 Nov.
TM 1-H37-S Dec Prep for Shipment.
TM 1-5N1-2-11-1 Nov Op and Serv Inst Type S-2 Slaved Gyro Magnetic Comp.
TM 1-43X5-2-1-101 Jan Op and Serv Inst w/Illus Pts Brkdn Link Trner Sens Alt/N 224K-031 (Kollsman).
TM 5-241-18 Dec Latitude Functions, Clarke 1866 Spher.
TM 5-3805-212-10 Dec Intrench Mach Combat: Unit Rig Mod 4262.
TM 5-3805-213-10 Dec Loader Adams Div LeTourneau-Westinghouse Mod 30 Traveloader.
TM 5-3805-222-12P Dec Grader, Road, Austin-Western Mod 99-H.
TM 5-3895-219-10 Jan Mixer, Conc Const Mach Mod 16SM.
TM 5-4120-209-20P Jan Air Conditioner: 60,000 BTU Carrier Mod 76D1.
TM 5-4310-228-15 Dec Compressor, 60 CFM Harris Model 3MV.
TM 5-4310-228-25P Dec Compressor, Rotary; Harris Mod 3MV.
TM 5-4320-210-20P Nov Pump, Cent 175 GPM 560 FT. Con Diesel Mod 4093.
TM 5-4320-212-20P Nov Pump, Cent Gas 2100 GPM 25 FT Head Carver Mod KN8L.
TM 5-4520-201-15P Jan Heater, Space, Hunter UH-58-SC-1, UH-58-SC-1-A.
TM 5-4610-203-20P Dec Water Purification Unit Met-Pro Inc Mod 3000-2700.
TM 2-5130-200-15 Dec Wrench, Impact Pneu Thor No. 80 Mod 7870.
TM 5-6115-213-10 Dec Generator, 45KW, Kurz & Root, Alex 1.
TM 5-6115-229-20 Jan Generator, 5KW, Hal-Gar CE 55-AC/WK6.
TM 9-243 Sept Use and Care of Handtools.
TM 9-1430-250-20P/2 Dec Nike-Herc.
TM 9-1440-250-20P/1 Dec Nike-Herc.
TM 9-2330-256-24P Jan Chassis, Trailer ¾-Ton, M116.
TM 9-4935-350-14/12 Dec Calibrator Set Description.
TM 9-4935-402-20P Dec LaCrosse
TM 9-6920-400-20P Dec LaCrosse
TM 10-3930-223-20P Jan Truck, Lift, Fork, Rough Terrain.
TM 10-3930-224-20P Jan Truck, Lift, Fork Gasoline 4000 Lbs Yale and Towne Army Model MHE 166.
TM 11-806, C8 Jan Radio Transmitter T-195/GRC-19.
TM 11-926, C1 Jan Power Unit PU-104/U.
TM 11-1214A, C3 Jan Oscilloscope OS-8C/U.
TM 11-2139-10, C2 Jan Terminal Telephone AN/TCC-7.
TM 11-2203, C5 Dec Teletypewriter Sets AN/TGC-1 thru -1C.
TM 11-2209, C5 Jan Teletypewriter repeater-mixer AN/FGQ-1.
TM 11-5089, C5 Jan Intercommunication Station LS-200/F1.
TM 11-5117, C2 Dec Power transfer switching unit SA-444/GSQ.
TM 11-5134-15, C3 Jan Signal generators SG-299/U.
TM 11-2805-231-20P Jan Telegraph Terminal Set AN/FGC-5.
TM 11-5805-262-12 Dec Switchboard, telephone SB-22/PT.
TM 11-5805-312-25P Dec Terminal, Telegraph AN/MSC-29.
TM 11-5805-321-12 Dec Alarm Monitor Group AN/FGA-5.
TM 11-5815-257-12P, C1 Jan Generators Ringing Hand G-42/PT.
TM 11-5815-262-20P Dec Teletypewriter Repeater-Mixer AN/FGQ-1 & AN/FGQ-1A.
TM 11-5820-222-10, C1 Jan Radio Sets AN/VRC-24 and AN/TRC-68.
TM 11-5820-334-20 Dec Receiver, Radio R-392/URR.
TM 11-5820-357-10 Dec Radio Receiver R-390/URR.
TM 11-5820-417-12P Jan Alarm-Monitor RM-4.
TM 11-5821-200-25P Dec Antenna AT-454A/ARC.
TM 11-5821-204-12 Nov Radio Set AN/ARC-44.
TM 11-5821-204-20P Jan Radio Set AN/ARC-44.
TM 11-5821-215-12, C1 Jan Flight Control Groups OA-2380/USD-1 and OA-2381/USD-1.
TM 11-5821-229-12 Jan Radio Set AN/ARC-45.
TM 11-5821-221-20P Jan Radio Set AN/ARC-45.
TM 11-5821-233-12P Dec Receiver, Radio R-510/ARC.
TM 11-5825-203-10 Jan Operator's Manual-Receiver Group OA-1451/PRR.
TM 11-5835-216-20P Dec Recorder Reproducer Sound RD-31/U and RD-31A/U.
TM 11-5840-220-10, C1 Jan Radar Set AN/MPQ-29.
TM 11-5840-220-20P Dec Radar Set AN/MPQ-29.
TM 11-5840-238-10, C2 Nov Radar Set AN/FPS-56.
TM 11-5841-218-20P Dec Radar Set AN/APQ-86.
TM 11-2895-213-10 Nov Sound Ranging Set GR-8.
TM 11-5895-241-20P Dec Communication Control Set AN/FSW-8(V).
TM 11-5895-258-20 Nov AN/MSQ-18 and Coder-Decoder Group OA-1593/MSQ-18.
TM 11-5965-217-12P Dec Microphone, Dynamic M-65/U.
TM 11-5965-218-15P, C1 Jan Microphone T-50 and Microphone Dynamic M-105/U.
TM 11-6110-201-15P, C1 Jan Distribution Box J-1077/U.
TM 11-6115-203-12, C1 Jan Generator Set PU-450/G.
TM 11-6115-222-15P Jan Trailer V-55/MR.
TM 11-6125-201-20P Jan Dynamotor-Power Supplies DY-93/G.
TM 11-6125-205-15P, C1 Jan Motor Generator PU-257/U.
TM 11-6140-200-15 Dec Battery Storage, BB-401/U.
TM 11-6625-359-25 Nov Manual Spectrum Analyzer Set AN/UPM-84.

TECHNICAL BULLETINS

TB 9-1440-250-20/9 Oct Nike Comparison Check Procedure.
TB AVN 23-15 Jan Install Heli-Coil Inserts.
TB AVN 23-61 Jan Decals-Pressure Sensitive.
TB CML 68 Jan Testing Kit, Impregnite-In-Clothing M2.
TB QM 143 Jan Maintenance Instructions Clothing, Men's Flying.
TB SIG 213-33 Jan Field Reports for Signal Corps Equipment.
TB TC 17 Jan Transportability Guidance M113.

LUBRICATION ORDERS

LO 5-2805-207-15 Dec Engine, Gas Chrysler Mod IND 908A.
LO 5-2802-209-12 Dec Engine, Wisconsin Mod MVF 4D.
LO 5-2805-210-12 Dec Engine, Gas Cont Mtrs Corp. Mod FS 244.
LO 5-2805-211-12 Dec Engine, Gas Cont Motors Corp Mod MS-330.
LO 5-2815-207-15 Dec Engine Diesel, Harnischfeger Mod 87C-18-Series.
LO 5-2805-211-20-3 Nov Grader, Road, Letourneau-Westinghouse Mod 220.
LO 5-3805-214-15-1-2 Nov Loader, Scoop Type Hough Mod H-30M.
LO 5-3805-224-15 Dec Scraper, Earth Moving Murray Mod AR 775.
LO 5-3810-220-20-1, -2, -3 Jan. Crane-Shovel Koehring Mod 155-1A.
LO 5-3895-217-20 Dec Distributor, Bit, Seaman-Gunnison Mod MTD.
LO 5-3895-219-20-1 Jan Mixer, Conc Construction Equip Mach Mod 16SM.
LO 5-3895-219-20-2 Jan Mixer, Conc, Construction Equip Mach Mod 16SM.
LO 5-3895-236-12-2 Dec Spreader, Conc Conc Mach LTD Mod S-200-250.
LO 5-4310-237-15 Dec Comp, Recip Skid Mtd; Johnson Mod 252-R.
LO 5-4320-211-12 Nov Pump, Cent Kurz and Root Mod Baldy 1.
LO 5-4320-214-12 Jan Pump Cent Chain Belt Mod 6LWG.
LO 5-4520-200-12 Dec Heater, Duct Type Herman Nelson-Amer. Air Filter Mod BT-400-10.
LO 5-6115-213-20 Dec Generator, Diesel, 45KW, Kurz & Root Mod Alex 1.
LO 5-6115-292-15 Dec Generator Set, Diesel, 150 KW Cummins Mod NVH-12-G-150KW-AC.

SUPPLY MANUALS

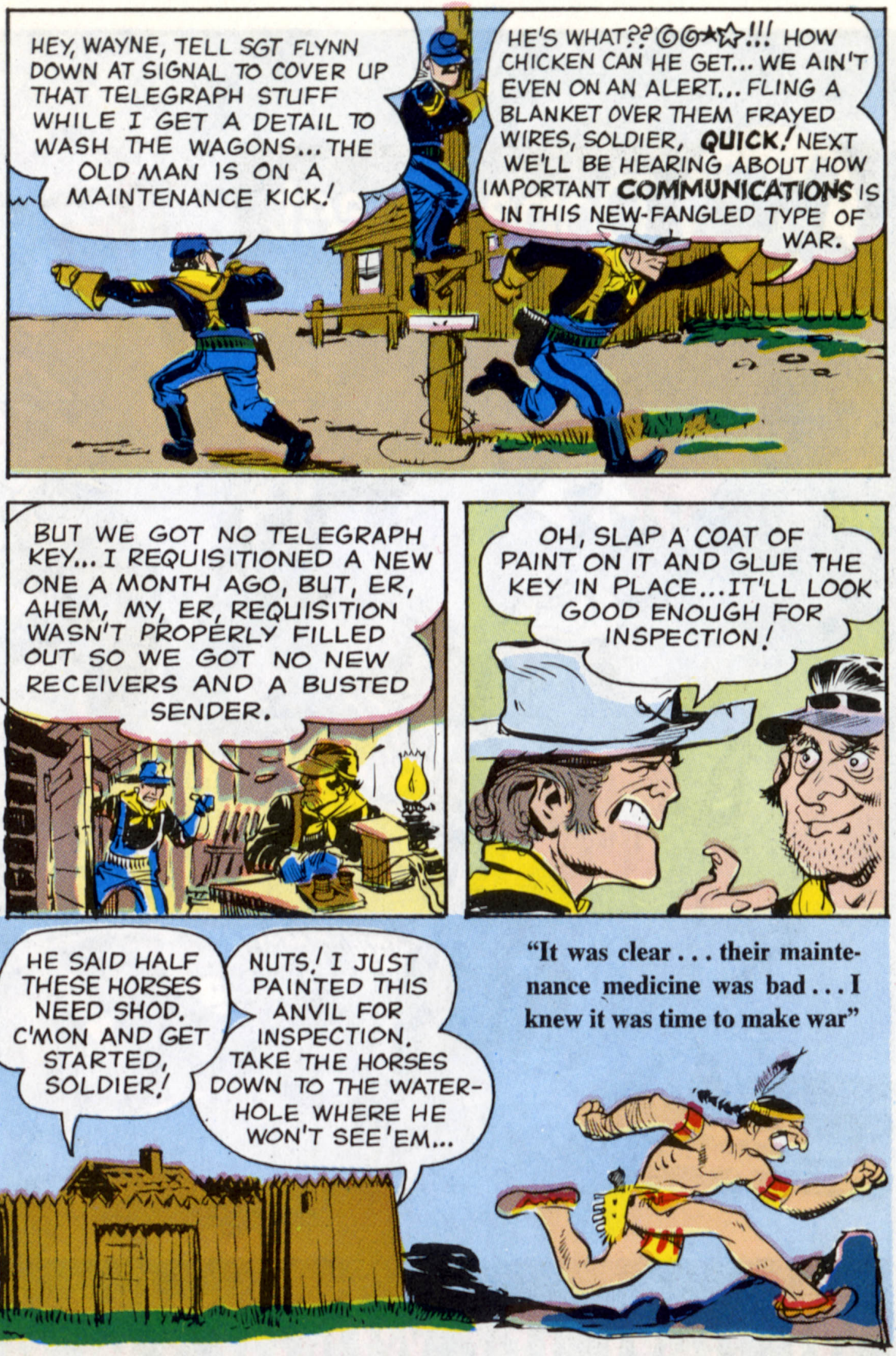
SM 3-4-6665-A39 Jan Water Testing Kit, Poisons M4A1.
SM 2-1-3910, 40, 50, 60, 90, 4100, 4200, 4300, 4410, 20, 30, 40, 50, 60, 4510, 20, 40, 4600 Jan.
SM 5-4-1080-SO6 Dec Camouflage Set, AA 50 Cal M.G.
SM 9-4-5180-A92 Jan Threading Set 1/4-20NC to 1-8 NC.
SM 9-4-5180-B19 Jan Tool Kit Repairman (Nike).
SM 10-1-5120, 5130, 5140, 5180 Jan Stock List End Items Alphabetical List Hand Tools.

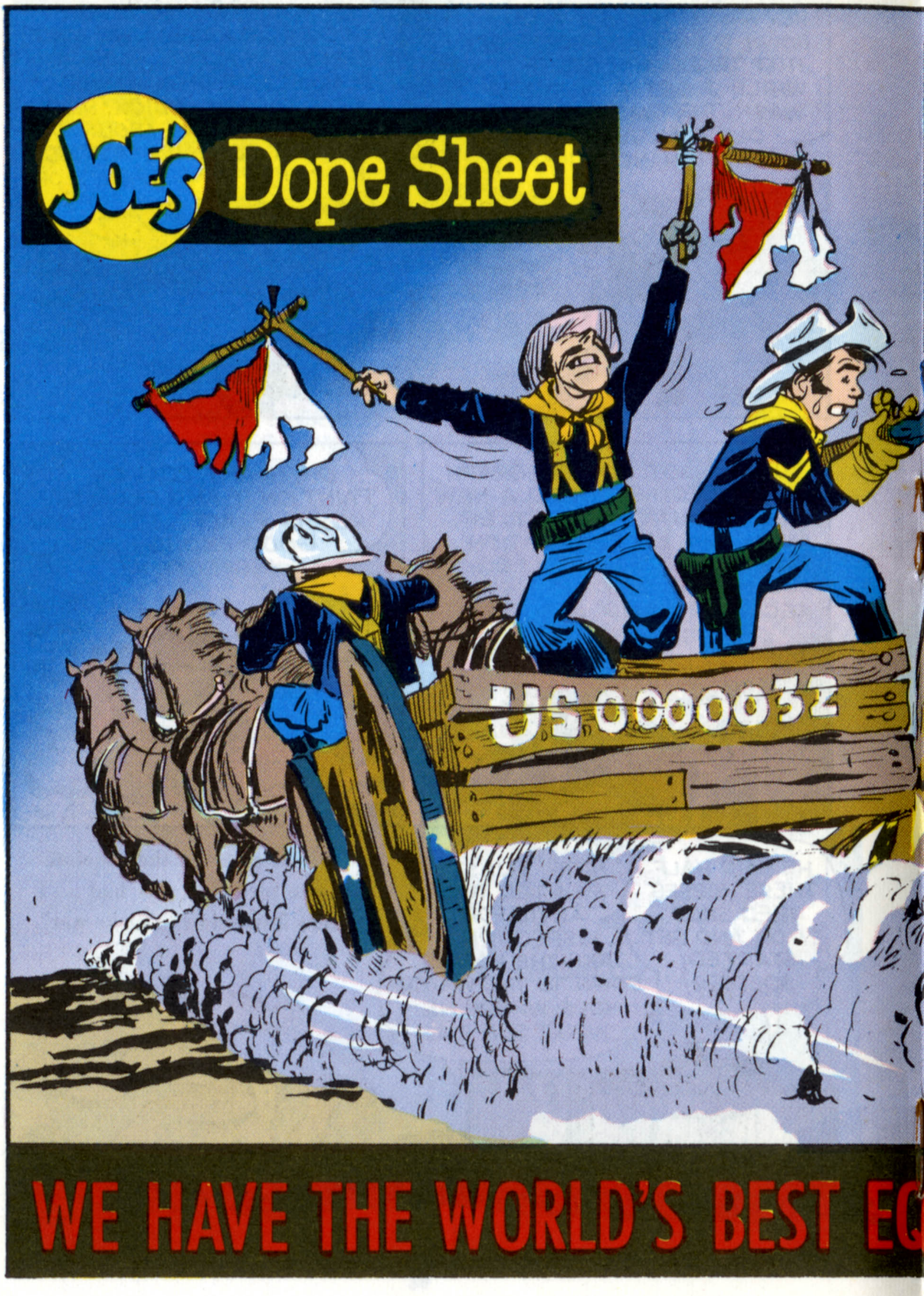
MISCELLANEOUS

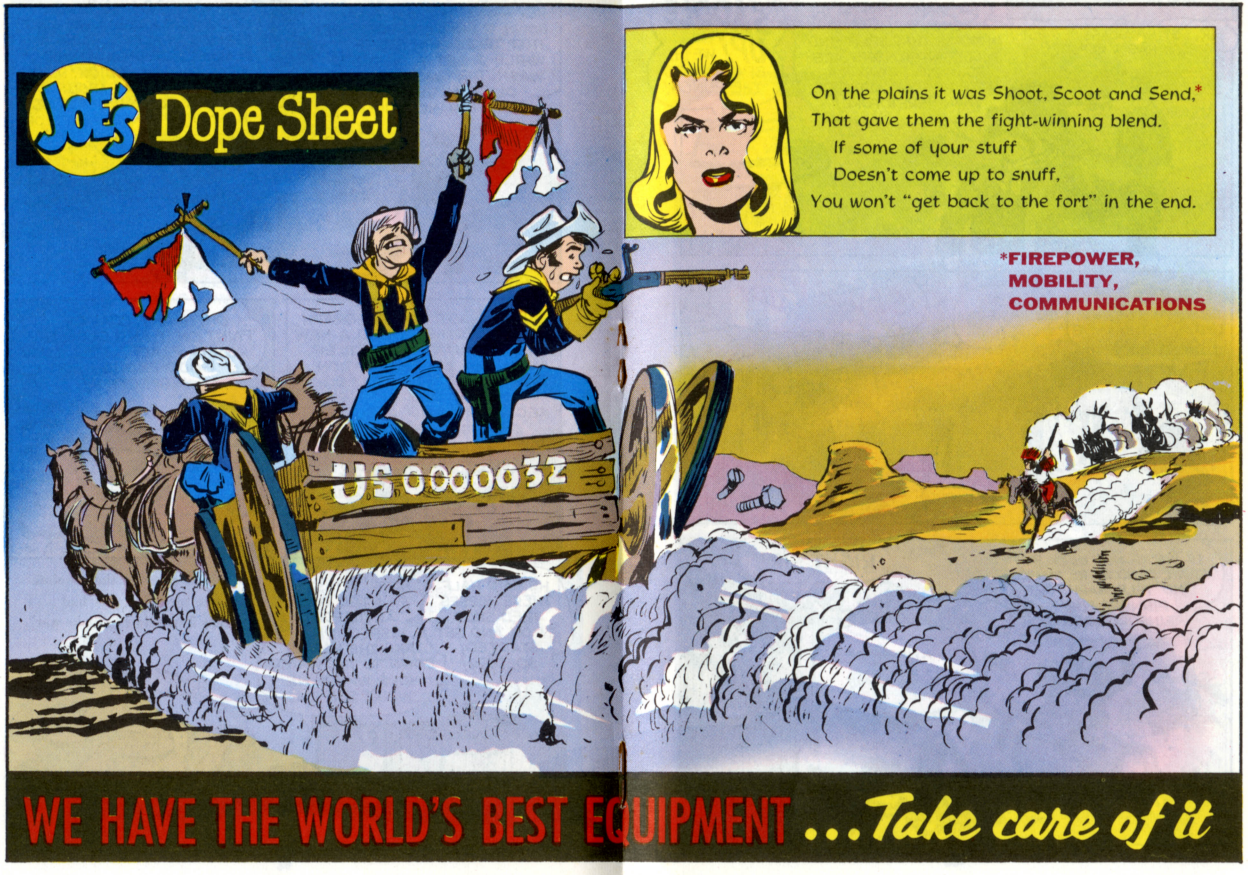
DA Form 9-92 Nov Nike-Herc Daily Check Sheet.
DA Form 9-189 Nov Corporal II Missile Test Data Sheets.
MWO 55-1520-204-20/1 Dec Safety of Serrated Adapter (47-631-245-1) Idle Stop Arm Carb Throt Shaft (H-13H).
ORD 7 SNL Y2 Dec Missile, Air Defense, M1 (Ajax).
SB 9-122 Jan Adopted Items of Material.
SB 11-510 Nov Adapter Photoflash Extension for Use with Camera Set KS-6(1).
TA 21 (Peace) Dec.

JOE'S DOPE
AFFAIR AT BIG LITTLEHORN
"Aye, Littlegoof, it will be told many time around the great council fires—how I, Splitting Bull, defeated the long knife, General Almond Custard."
"Splitting Bull talks with half tongue—many times we hear HOW... Now it is time we hear WHY!"

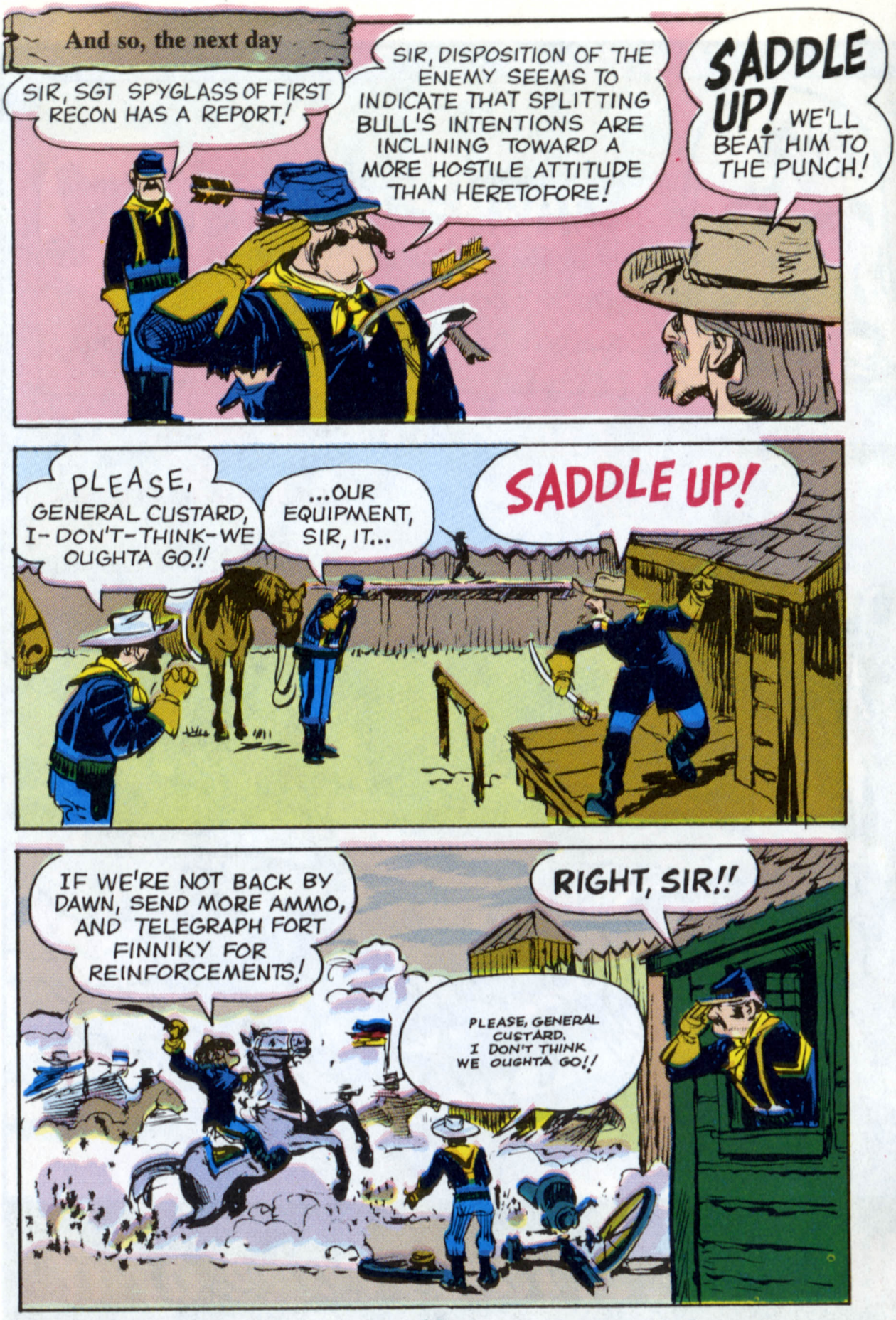
"Many moons have I sat inside garrison at Fort Neglect and seen how long knives prepare for war"


HEY, WAYNE, TELL SGT FLYNN DOWN AT SIGNAL TO COVER UP THAT TELEGRAPH STUFF WHILE I GET A DETAIL TO WASH THE WAGONS... THE OLD MAN IS ON A MAINTENANCE KICK!
HE'S WHAT?? ©©★☆!!! HOW CHICKEN CAN HE GET... WE AIN'T EVEN ON AN ALERT... FLING A BLANKET OVER THEM FRAYED WIRES, SOLDIER, QUICK! NEXT WE'LL BE HEARING ABOUT HOW IMPORTANT COMMUNICATIONS IS IN THIS NEW-FANGLED TYPE OF WAR.
BUT WE GOT NO TELEGRAPH KEY... I REQUISITIONED A NEW ONE A MONTH AGO, BUT, ER, AHEM, MY, ER, REQUISITION WASN'T PROPERLY FILLED OUT SO WE GOT NO NEW RECEIVERS AND A BUSTED SENDER.
OH, SLAP A COAT OF PAINT ON IT AND GLUE THE KEY IN PLACE... IT'LL LOOK GOOD ENOUGH FOR INSPECTION!
HE SAID HALF THESE HORSES NEED SHOD. C'MON AND GET STARTED, SOLDIER!
NUTS! I JUST PAINTED THIS ANVIL FOR INSPECTION. TAKE THE HORSES DOWN TO THE WATER-HOLE WHERE HE WON'T SEE 'EM...
"It was clear . . . their maintenance medicine was bad . . . I knew it was time to make war"


JOE'S
Dope Sheet
US 0000052
WE HAVE THE WORLD'S BEST EQ


JOE'S Dope Sheet
On the plains it was Shoot, Scoot and Send.*
That gave them the fight-winning blend.
If some of your stuff
Doesn't come up to snuff,
You won't "get back to the fort" in the end.
*FIREPOWER, MOBILITY, COMMUNICATIONS
US 0000032
WE HAVE THE WORLD'S BEST EQUIPMENT ...Take care of it

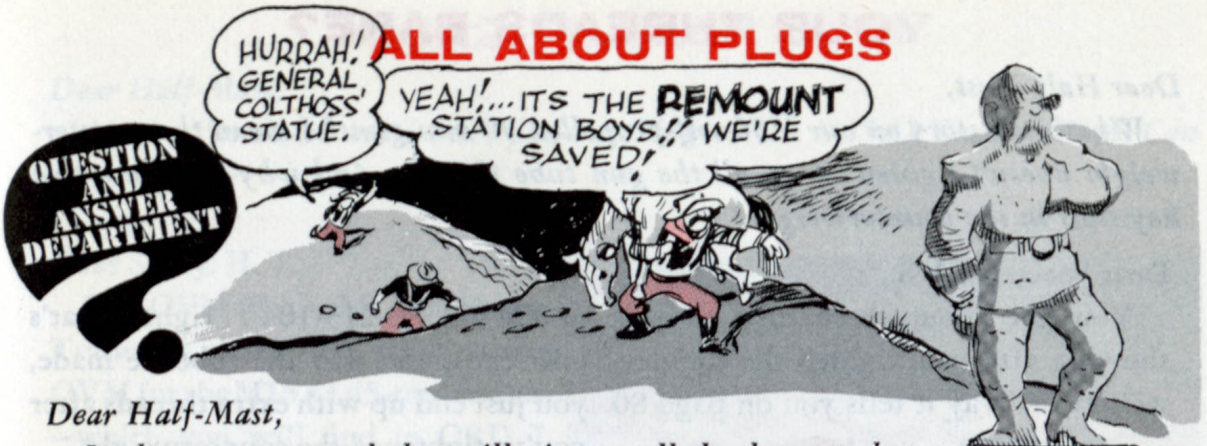
On the plains it was Shoot, Scoot and Send,*
That gave them the fight-winning blend.
If some of your stuff
Doesn't come up to snuff,
You won't "get back to the fort" in the end.
*FIREPOWER, MOBILITY, COMMUNICATIONS
UIPMENT ...Take care of it


And so, the next day
SIR, SGT SPYGLASS OF FIRST RECON HAS A REPORT!
SIR, DISPOSITION OF THE ENEMY SEEMS TO INDICATE THAT SPLITTING BULL'S INTENTIONS ARE INCLINING TOWARD A MORE HOSTILE ATTITUDE THAN HERETOFORE!
SADDLE UP! WE'LL BEAT HIM TO THE PUNCH!
PLEASE, GENERAL CUSTARD, I- DON'T-THINK-WE OUGHTA GO!!
...OUR EQUIPMENT, SIR, IT...
SADDLE UP!
IF WE'RE NOT BACK BY DAWN, SEND MORE AMMO, AND TELEGRAPH FORT FINNIKY FOR REINFORCEMENTS!
RIGHT, SIR!!
PLEASE, GENERAL CUSTARD, I DON'T THINK WE OUGHTA GO!!

DAWN
IT'S DAWN AND THEY AIN'T BACK...GET CRACKIN'!
RIGHT!!
GET ON THAT TELEGRAPH, SOLDIER... AND TELL FORT FINNIKY WE NEED...
WE CAN'T... THIS TELEGRAPH IS ON THE BLINK... KEY DON'T WORK, WIRE'S SPLIT...BATTERY ACID SPILT...
HOW ABOUT THE AMMO?... SUN'S UP! OUR WAGONS AIN'T STARTED TO MOVE YET!!
THE WHEELS ARE BUSTED, SPOKES MISSING AND WE GOTTA GREASE 'EM...
THEM HORSES'LL TAKE HOURS TO SHOE AND NOBODY KNOWS ZILCH ABOUT A GATLING...
THEN... GASP-
YES... GULP... THEY'RE DOOMED!

"And so we swept down upon them as wolves of the timber upon deer at watering . . ."
"Then, tell us Splitting Bull . . . why, then, did the pony soldiers from distant fort make raid on our village, catching sentry asleep . . ."
BECAUSE...YOUR BRAVES DID WAR DANCE, WHILE BOW STRINGS LAY BROKEN, CRACKED LANCES AND WARPED ARROWS WENT UNMENDED, PONIES FOUNDERED ... MILDEW ATE HOLES IN BLANKETS SO SMOKE SIGNALS WERE NOT CLEAR... HEAP CRUMMY MAINTENANCE
BAD MEDICINE ANY TIME!!
U.S. MILITARY STOCKADE

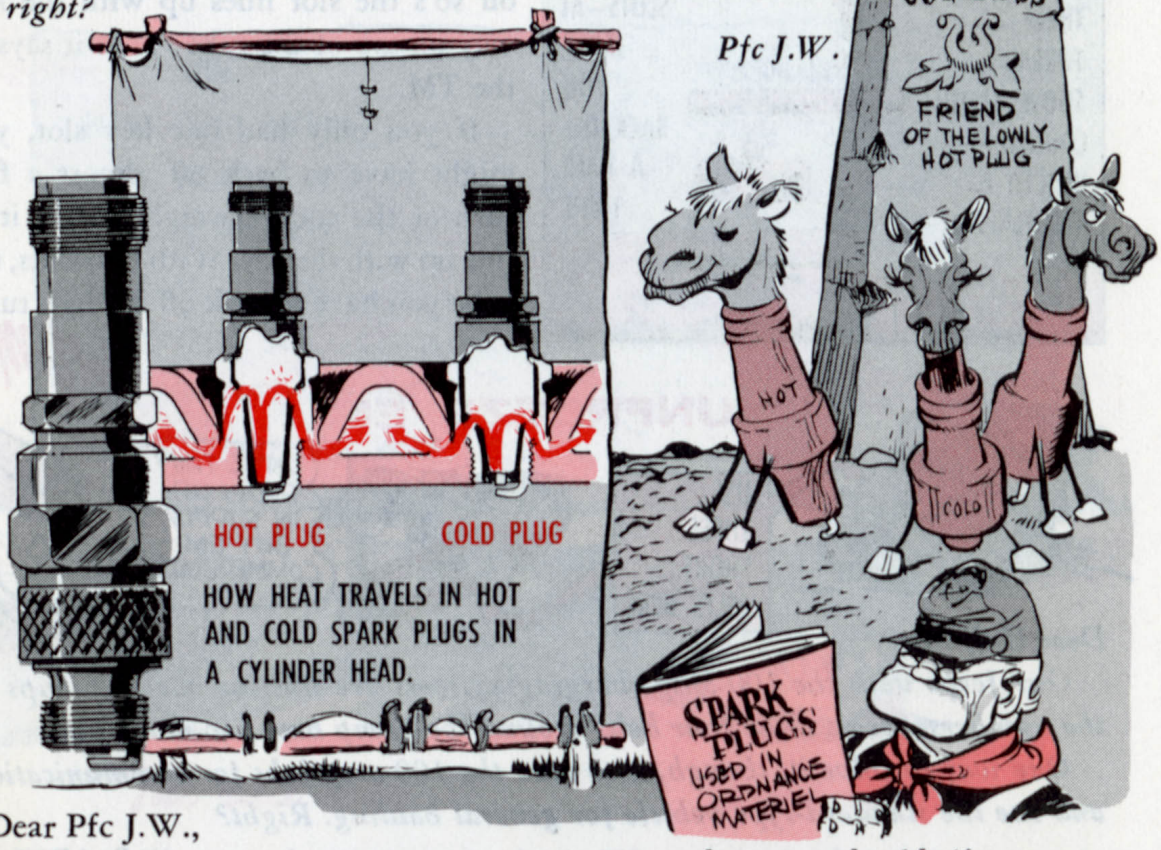
ALL ABOUT PLUGS



Dear Half-Mast,

Is there any manual that will give us all the dope on hot and cold spark plugs? I think you need a hot spark plug when you use your truck for fast, long distance travel, but my motor sergeant says that's when you need a cold spark plug. Who is right?

Pfc J.W.



Dear Pfc J.W.,

Your motor sergeant is right.

TM 9-8638 (17 Dec 56) spells it out that you use cold spark plugs with a hot-type engine, high speeds, minimum starts and stops, severe service and hot climates.

Hot plugs are for cold type engines, low compression, low speeds, frequent starts and stops and cold climates.

"Spark Plugs Used On Ordnance Material" is the TM's title. If you don't have one in your automotive shop or pool, you get a copy on a "need-to-know" basis by citing AR 310-1, para 41 b, Change 4.

Half-Mast

YOUR THREADS BARE?

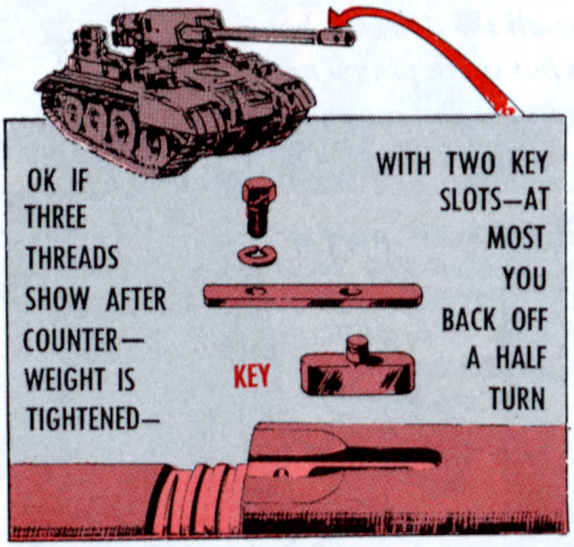
Dear Half-Mast,

What's the story on our M56 self-propelled 90-mm guns? I mean the counterweight doesn't tighten up on all the gun tube threads. And why are there two key slots in the counterweight?

SP5 J. S.

Dear Specialist J. S.,

You get about three tube threads showing after you tighten the counterweight the way it tells you on page 80 of TM 9-2350-213-10 . . . right? That's OK 'cause the way the tubes're made, you just end up with extra threads after you've tightened the counterweight.

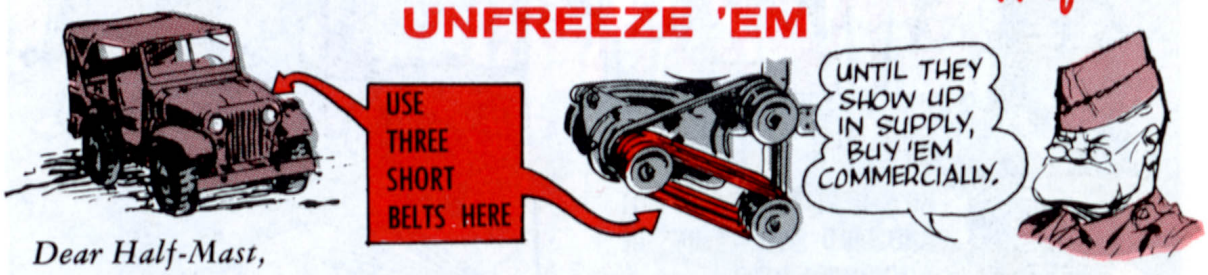


Those two key slots mean you do less turning of the counterweight after you've tightened it and then backed it off so's the slot lines up with the key way on top of the tube . . . as it says in the TM.

If you only had one key slot, you might have to back off almost a full turn of the counterweight to get it to line up with the key. With two slots, the most you have to back off is a half turn.

Half-Mast

UNFREEZE 'EM



Dear Half-Mast,

Our Jeeps with the 100-amp charging systems are busting water pumps by the numbers. Seems those four belts around the pump have too much pull.

One way to solve it, though, is to save the 100-amp jobs for communications and use the standard-type vehicle for general hauling. Right?

Sp4 B. A. M.

Dear Specialist B. A. M.,

No need to "freeze" those M38's and M38A1's with the 100-amp charging systems. Short belts will put 'em back in circulation.

One belt is all you need to run that pump. So you can replace three of the four with belts that connect only the crankshaft and alternator pulleys.

The belts you need are 37 1/8 x 3/8 x 38 degrees. Until they show up in supply you'll have to buy 'em commercially. Might take a look at page 13 of PS 86 for more info about 'em.

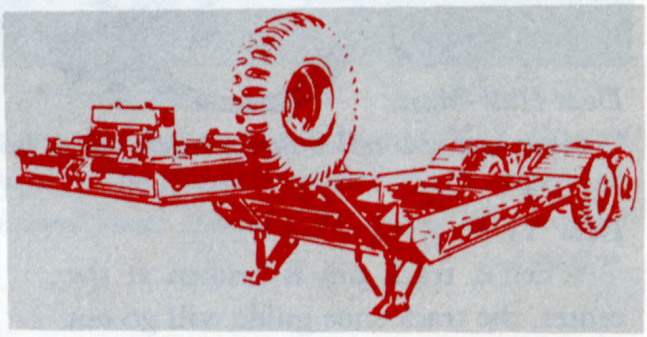
Half-Mast

M15A2 TRAILER OVM

Dear Half-Mast,

Maybe I'm dumb but I can't find anything on the M15A2 Trailer OVM. Can you help me?

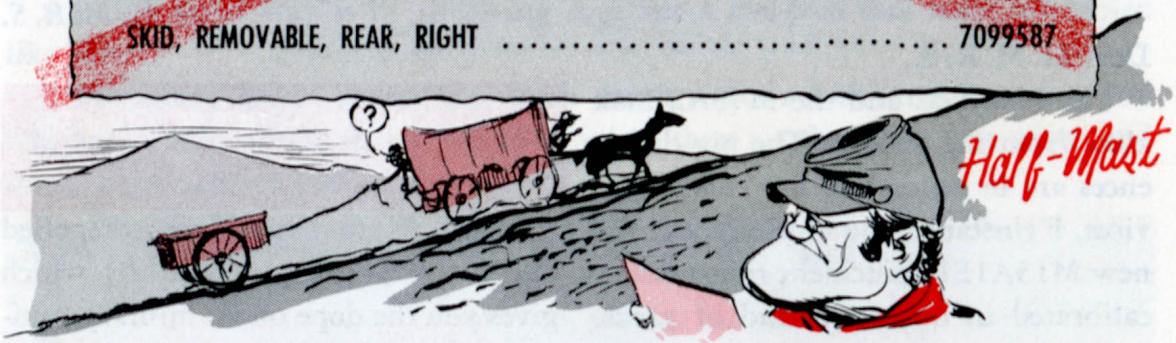
SFC J. H. T.



Dear SFC J. H. T.,

The OVM for the M15A2 50-ton Trailer is nearly the same as the OVM for the M15A1 45-ton Trailer —which you will find in ORD 7 SNL G160 (7 Aug 52) pages 55-58. Just leave these 7 items off the M15A1 OVM list and you'll have the M15A2 OVM list:

ITEM	ORDNANCE PART NUMBER
PLANK, TREAD, BOTTOM	7099580
PLANK, TREAD, CURVED	7348248
PLANK, TREAD, FRAME	7099581
PLANK, TREAD, FRONT	7099582
PLANK, TREAD, SKID	7099583
SKID, REMOVABLE, REAR, LEFT	7099586
SKID, REMOVABLE, REAR, RIGHT	7099587



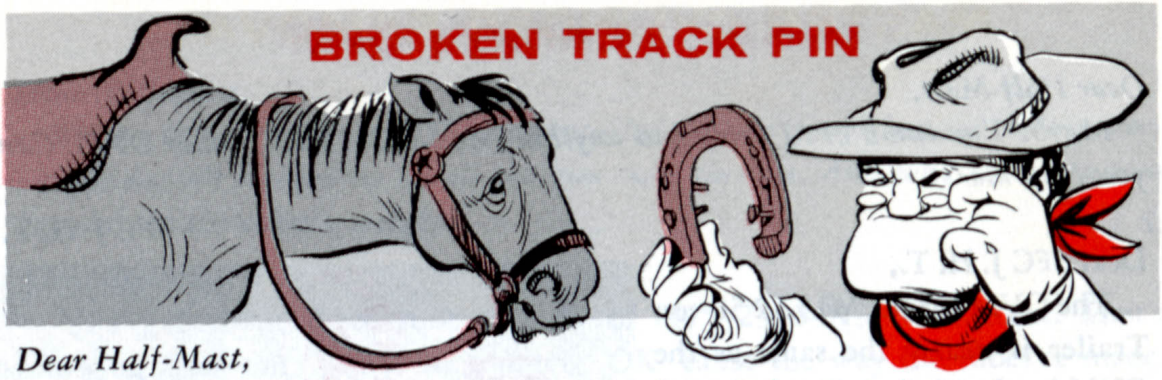
The rail way

You artillery outfits that maintain the M289 or M386 Honest John rocket launchers . . . don't stash away your copy of TB 9-1000-212-20 and forget about it. That's the one that tells you how to check your launcher rails for straightness. And as the TB says, you make the check every 30 days.

Semi ramps

Want to get loaded without a strain? If you're having trouble getting a load on the M172 or M172A1 semitrailer, maybe you need loading ramps. Get 'em for both these semi's by asking for Ramp, loading (welded), FSN 2510-353-6554 (ORD).

BROKEN TRACK PIN



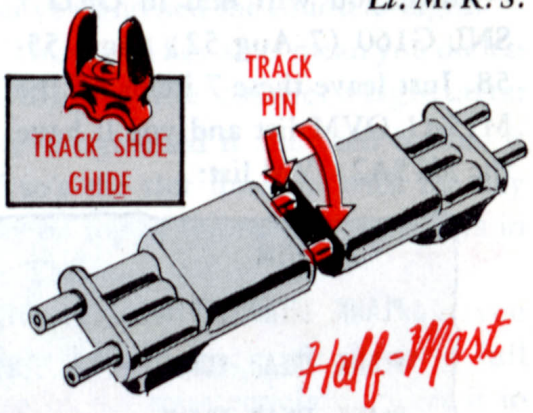
Dear Half-Mast,

How can you tell when a track pin is broken at the center?

Lt. M. R. S.

Dear Lt. M. R. S.,

When a track pin is broken at the center, the track shoe guide will go out of alinement. You may not see this at first, but move the tank a foot or so and you will see the track shoe guide twisting into positions that wouldn't be possible if the track pin wasn't broken.



WHAT'S THE M48A2C?

Dear Half-Mast,

Thanks for telling us about the M48C tank in PS 91. But I think there is an M48A2C tank. Where does it fit in the picture?

Lt. M. R. S.

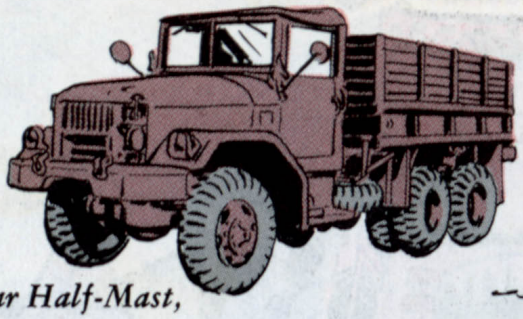
Dear Lt. M. R. S.,

The M48A2C and the M48A2 look alike from the outside. The big differences are in vision and fire control devices. F'rinstance, the M48A2C has the new M13A1E1 coincident range finder calibrated in meters instead of yards, while the M48A2 has the M13A1 stereoscopic range finder.

Change 3 (Nov 59) to TM 9-7022 (Mar 58) has the dope.

You'll also find the differences spelled out in TM 9-236 (12 Sept 60) which gives you the dope on all military tactical vehicles that Ordnance is responsible for.

MASTER CYLINDER REMOVAL



Dear Half-Mast,

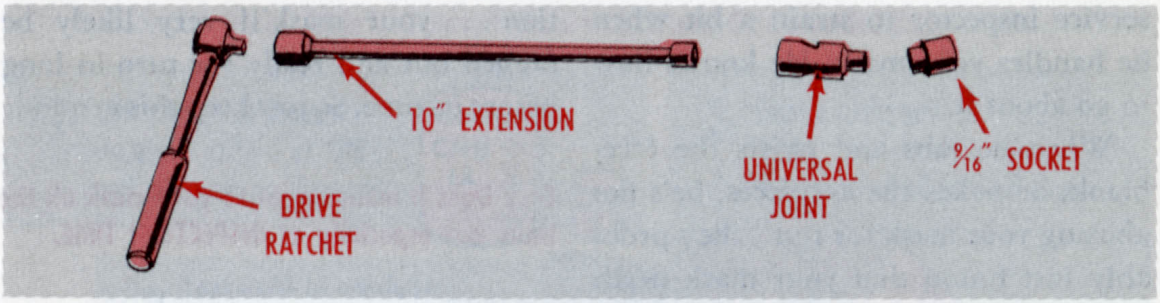
We got trouble taking off the master cylinder on the M34 and M35 2½-ton trucks. The 4th cap screw and stud next to the frame is mighty tough to get out.

Can you tell us an easier way, or is there some special type of wrench for this?

Sp4 D.C.P.

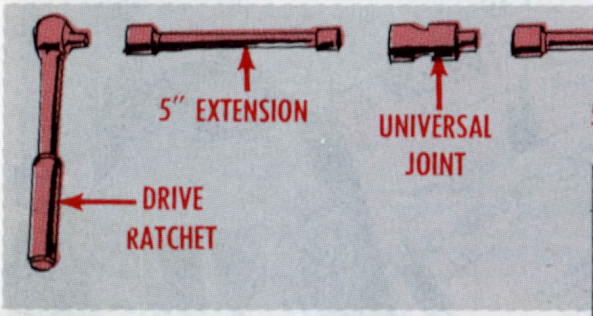
Dear Sp4 D.C.P.,

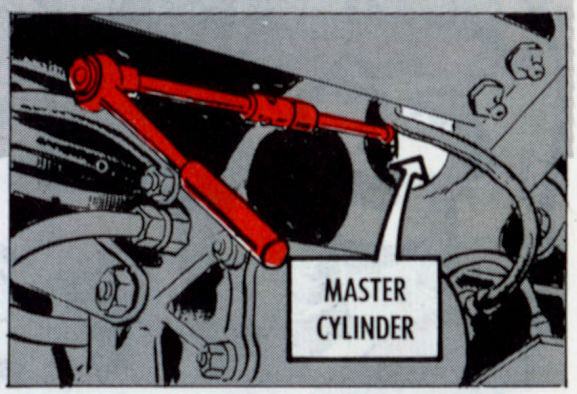
Sorry, there's no special wrench for this job. You can get the stud out with the ½-inch square drive ratchet, 10-in extension, ½-in square drive universal joint and 9/16th socket, all from the General Mechanics Tool Set.



Another good way is by throwing together a five-part task force assembled like this:

Your square drive ratchet, on which you first put a 5-in extension; then you add your ½-in square drive universal joint; then another 5-in extension; and lastly your 9/16th socket.





This works OK but it takes one more 5-in extension than you have in your tool set, so you borrow one from another mechanic or from your Ordnance Support.

Half-Mast

INSPECTION FATIGUE...?

He's not very likely to, but if he ever does . . . don't fret. It's OK for the tech service inspector to strain a bit when he handles your mask. He knows how to go about it.

When he jabs and twists the face-blank, or pokes the eyepieces, he's not abusing your mask for fun...he's probably just found that your mask needs an extra close check.

Your own care and handling of the mask isn't supposed to be exactly baby-gentle, of course . . . but, on the other hand, it doesn't normally call for so much extra muscle.

If you copy your inspector's routine every time your outfit has mask inspection . . . your mask'll very likely be fagged out and ready for turn-in long before its time. So just keep this in mind:

Easy Does It means a lot to your mask all the time, but especially at INSPECTION TIME.

For a step-by-step run-down on mask care see TM 3-522-15 (M9A1 protective mask), TM 3-4240-202-15 (M17 protective mask), FM 21-41, page 161 "Your Lifesaver," and PS 95, pages 29-36.

Latest tests show CNB's a bit quicker than you may've guessed. It's got a flash-point of less than 40°F.

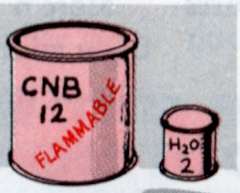
You'd best take time right now to memorize this Chemical Corps caution concerning this training and tear gas.

CNB (FSN 1365-277-3047, CML) IS FLAMMABLE AND SHOULD BE HANDLED WITH THE SAME RESPECT YOU GIVE OTHER FLAMMABLE MATERIALS.

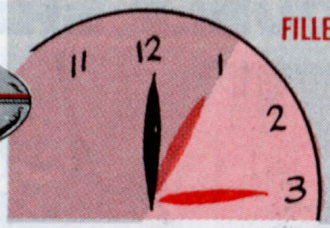
The new handling procedure for CNB—which the Chemical Corps recently TWX'd to all concerned says—

Use of CNB in M10 aircraft smoke tanks is now OK'd provided that:

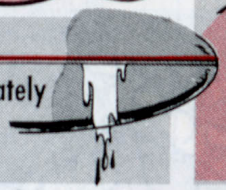
1. CNB mixture is made up of 12 gallons of CNB and two gallons of water.

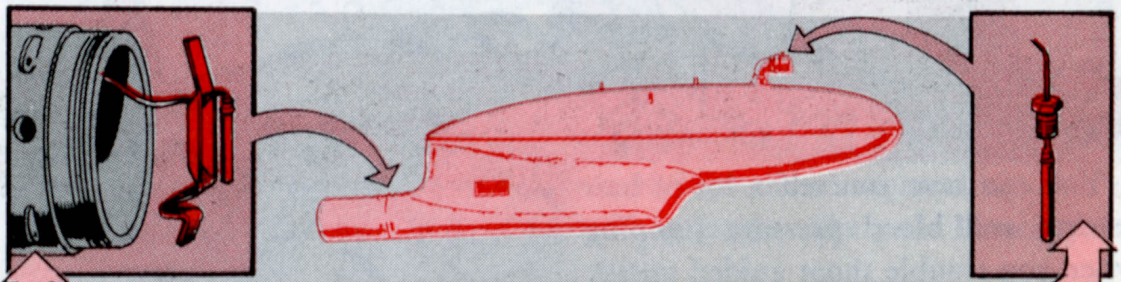


2. Smoke tanks will be filled not more than two hours ahead of take-off time.



3. Tanks will be carefully checked for leaks immediately before take-off.

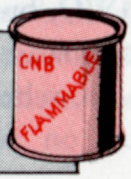




4. A number four blasting cap will be used at the tank's air inlet, and a number six blasting cap at the discharge outlet.

5. **Operation Note:** Aircraft must be in level flight at the beginning of the spray operation.

6. **Handling and Storage:** All CNB containers will be marked "FLAMMABLE," and they'll be handled and stored with the same safety precautions which apply to other flammable materials.



PLEASE TO TORQUE

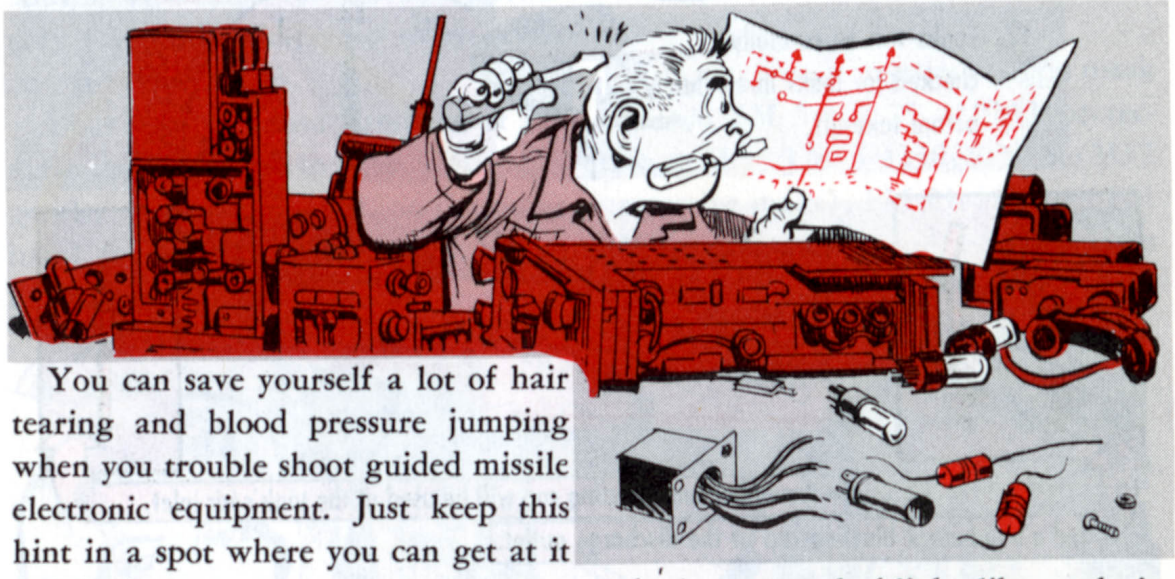
It's been said before—but it's one of those things that can't be repeated too often.

Torque all components of your Honest John rocket according to the figures spelled out in your TM.

In other words... don't overtorque or undertorque with your torque wrench. And don't guess at the right torque figure by using an ordinary wrench.

More'n one outfit has had a perfect flight with an Honest John—except that a fin or two fell off along the way.

TROUBLE SHOOTING TROUBLES

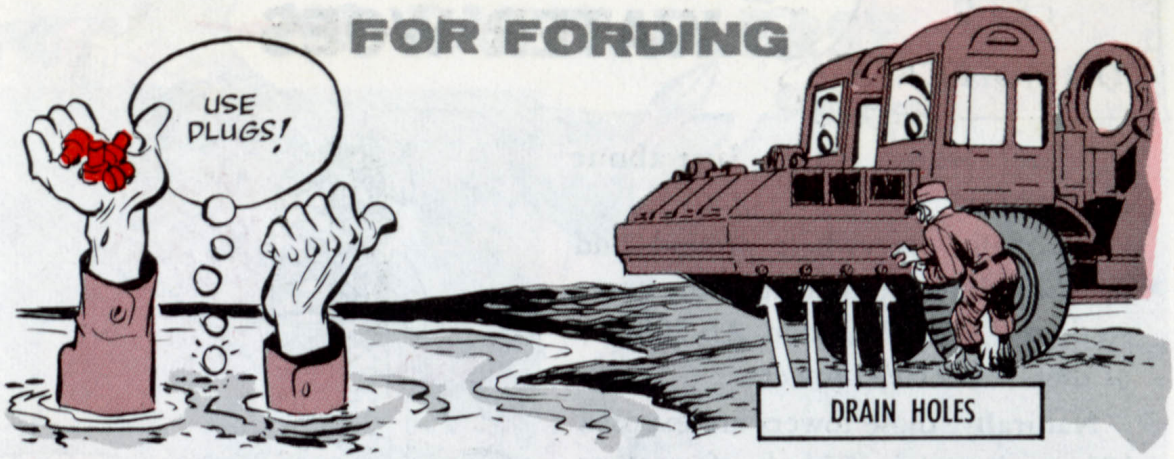


You can save yourself a lot of hair tearing and blood pressure jumping when you trouble shoot guided missile electronic equipment. Just keep this hint in a spot where you can get at it quick-like.

A circuit may be changed by an MWO, but it doesn't show up in your schematics.

So, when you go to trace out a circuit on your schematics to find out what's gone on the blink—like maybe in a chassis—check the MWO's that've been applied. Your trouble could be something like a capacitor that was added by an MWO... and which doesn't show up on your schematics.

FOR FORDING



A question's been making the rounds in Corporal outfits.

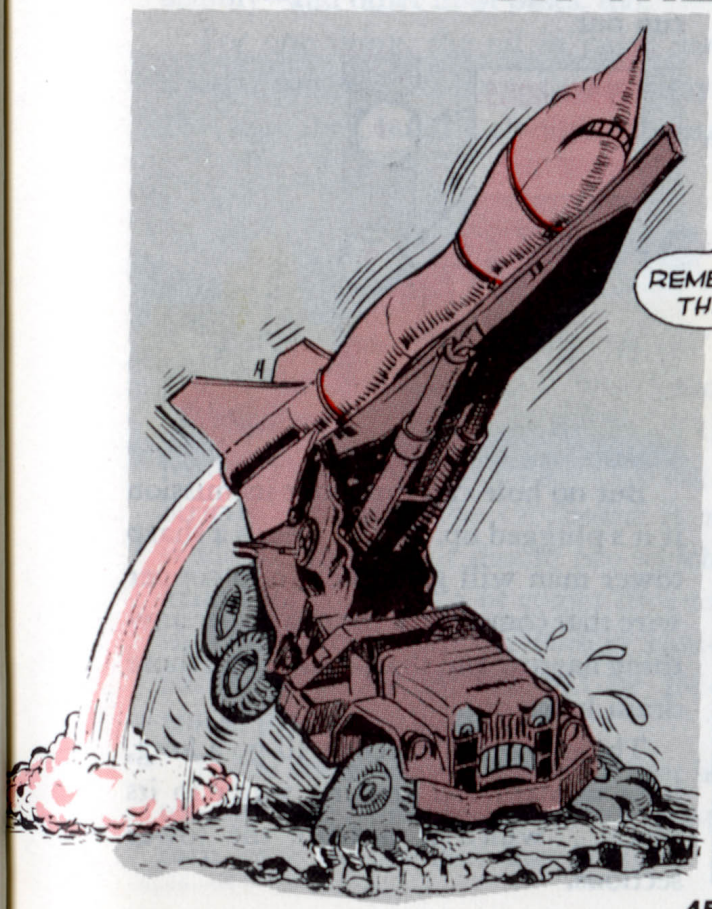
Some guys're wondering what those four threaded holes are for on each side of the engine compartment of the erector.

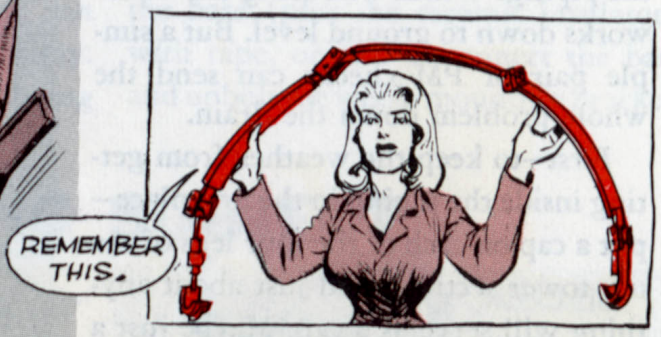
They're not there by accident—that's for true.

The answer's in a note under paragraph 83 of TM 9-5048-12. And the note tells you plugs get put in the holes before fording.

You won't find the plugs in Ord 7 SNL Y- 61, but your support unit can get them for you. Tell the man from support they're listed in Ord 8 SNL Y-61 as plug, pipe, FSN 4730-010-6644.

ON THE BEAM





Some things're held up without straps. Then there're some things that're held by straps—like your Honest John rocket.

And that means you fasten down the rocket with the straps when it's in travel position.

But—don't forget to take off the straps before you push the fire button. Things'll really get torn up if the rocket tries to get off the beam with the straps saying it should stay.

LET'S COMMUNICATE

WATER WOES

Water, water, water. Just about everywhere.

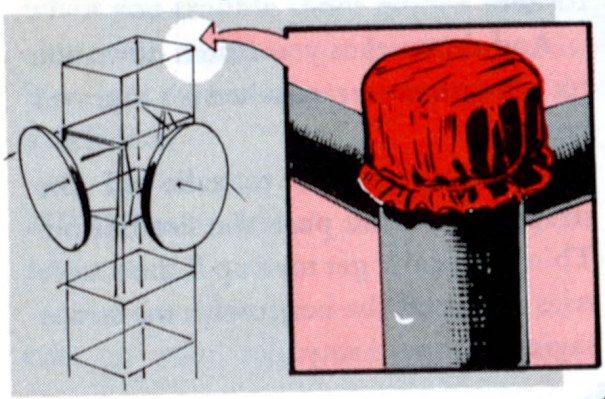
Especially everywhere around—and in—the hollow piping used in the tower sections (AB-207/U and AB-208/U) of those AB-216/U towers.

Naturally, those towers are exposed 101 per cent to all kinds of weather everywhere. Not only that, but moisture formation, rusting, condensation, freezing and a few other watery tricks are going on right now **inside** the horizontal and vertical piping of the tower sections.

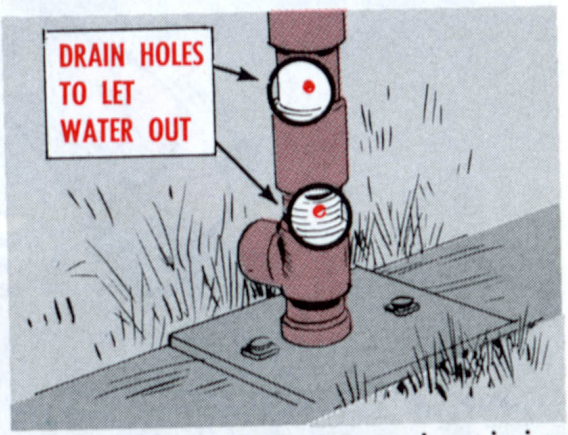
Which is especially dangerous in cold weather.

Because once that water freezes in there, it'll bulge, distort and soon bust the piping. Which will bring the whole works down to ground level. But a simple pair of PM checks can send the whole problem down the drain.

First—to keep the weather from getting inside the piping in the first place—put a cap on each of the four legs of the top tower section. And just about anything will serve as a cap. Maybe just a small piece of plastic stretched across the top and held in place by light wire or even string.



As for any water that may already be inside the sections —there are drain holes in the horizontal and vertical tower members designed to let the water run out.



But no hole can carry out its mission if it's plugged up. Which means a sharp tower man will grab the No. 6 copper wire that comes with the tower (or anything narrow and sharp) and clean those drain holes out.

These two PM checks will go a long, long way toward keeping water in its place . . . which is **outside** the tower sections.

Paint it to preserve it.

Sound policy, of course, for metal and wood surfaces.

But the worst in the world when it comes to rubber. Especially the rubber section of your AB-15/GR mast base assembly—and other mast bases, too.

For one thing, the oil in paint just doesn't mix with rubber. Eats it away. Not only that, but the air-tight coating that paint forms will dry out rubber and destroys flexibility.

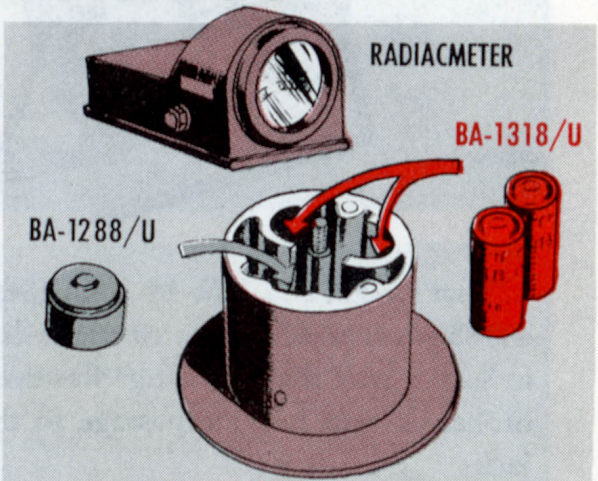
So if a vehicle with a radio mounted in it gets the call for a paint job—always take a few minutes to do one or two things. Either cover the rubber part of the base (plus the ceramic insulator) with tape, or just disconnect the base and unbolt the whole mounting bracket.

FITTING SUBJECT

"Sam, you made the jacket too big!"

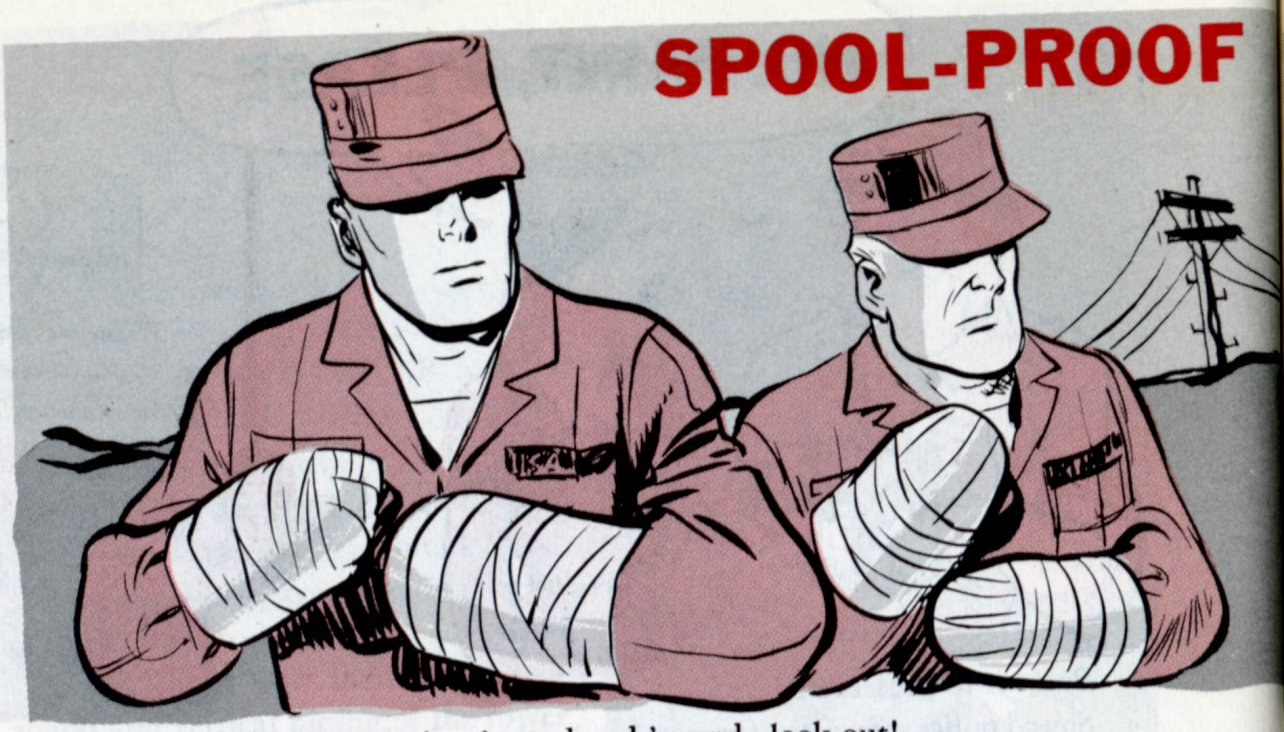
Or something like that. Anyway, the cardboard jackets that some BA-1318/U batteries are dressed in are a bit too big. Strictly speaking, the cardboard is a shade thicker than it should be—which makes for too tight a fit comes time to slip the battery into the battery compartment of its IM-108/PD or IM-108A/PD Radiacmeter.

If you come across a BA-1318 that is too tight a fit, don't force the issue. Just turn 'er in for one that does fit right.



IF A BA-1318/U IS TOO TIGHT FOR COMPARTMENT EXCHANGE FOR ONE THAT WILL FIT

SPOOL-PROOF

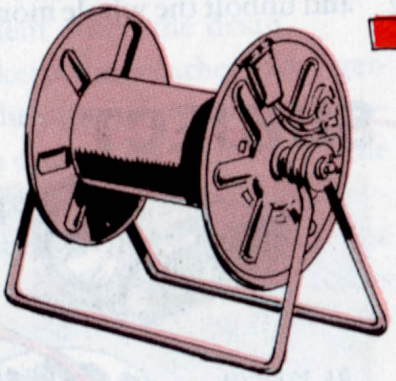


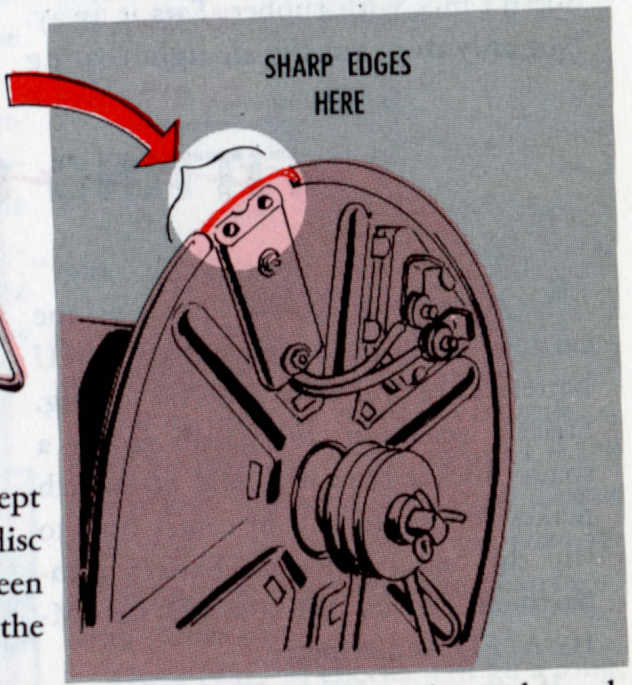
When the spool starts going 'round and 'round—look out!

'Cause there're two sharp edges on the flange that are naturals to hurt, and hurt bad, if they catch a wireman on the hand or arm or anywhere.

What spool? What flange and what sharp edges, where? It's the DR-8A Spool when she's harnessed to a reel bracket to become an RL-39 Reel.

And the sharp edges are found where the flange is cut through to allow access to the U-17/GT Jack (all part of the Connecting and Switching Kit MX-155/GT).





That's right . . . TM 11-2546 (Sept 44) shows that jack mounted on the disc in such a way that the flange has been broken so's to provide passage to the jack.

But, like the man with the bleeding wrist says, when that flange is cut through, you're liable to end up with two sharp edges that can cut deep when the reel starts spinning around.

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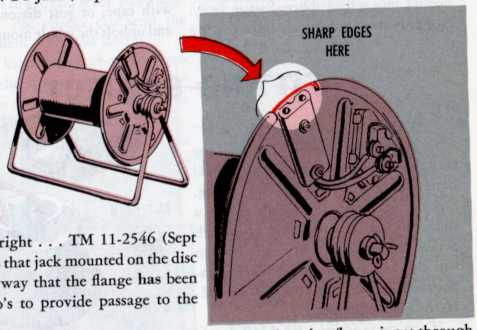

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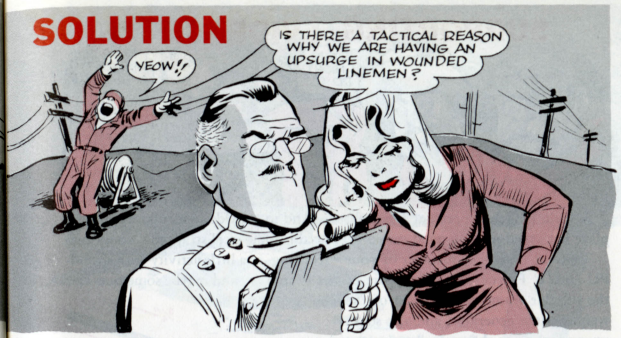
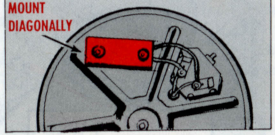
SOLUTION



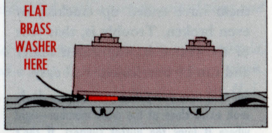
So, a safe method for mounting that jack has been given the affirmative sign by the Signal Corps.

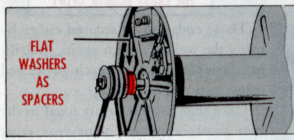
Simply stated, the idea is just to mount that jack at an angle to eliminate the need for cutting the flange in the first place.

First, of course, position the plug. And then drill the two mounting holes. You'll use the same two nuts and bolts to mount the jack **diagonally** as you'd use if mounting it vertically . . . only the angle is different.



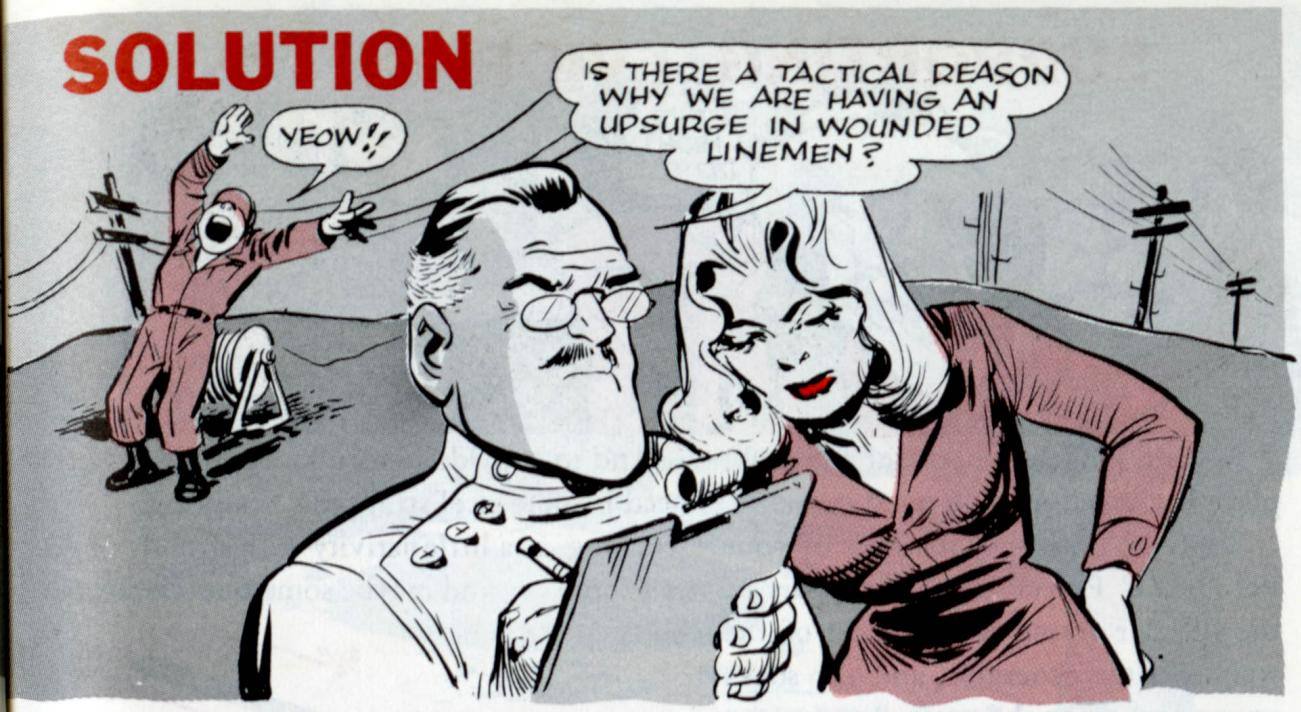
But in order to clear the ribbing on the disc, the open end of the jack will have to be elevated a trifle. The thickness of a flat brass washer between disc and jack will handle that lifting job nicely.





Now there's one thing to bear in mind once the jack is set in its new position. The jack just might bump against the frame of the bracket as the spool revolves.

You can correct this pronto by using two standard 7/16-in flat washers as spacers on the axle between the spool and the frame. Roll on.



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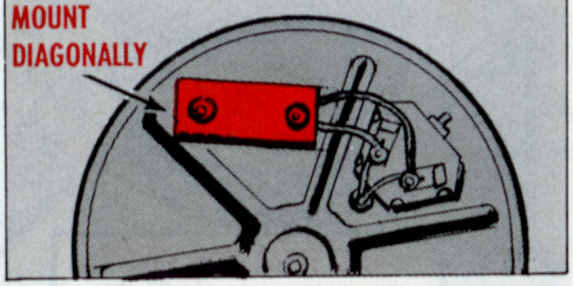

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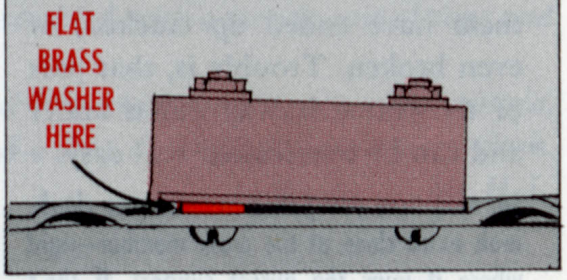

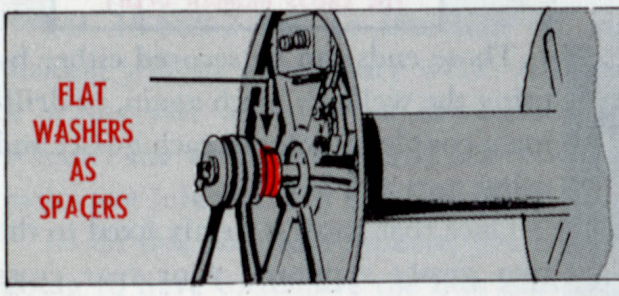

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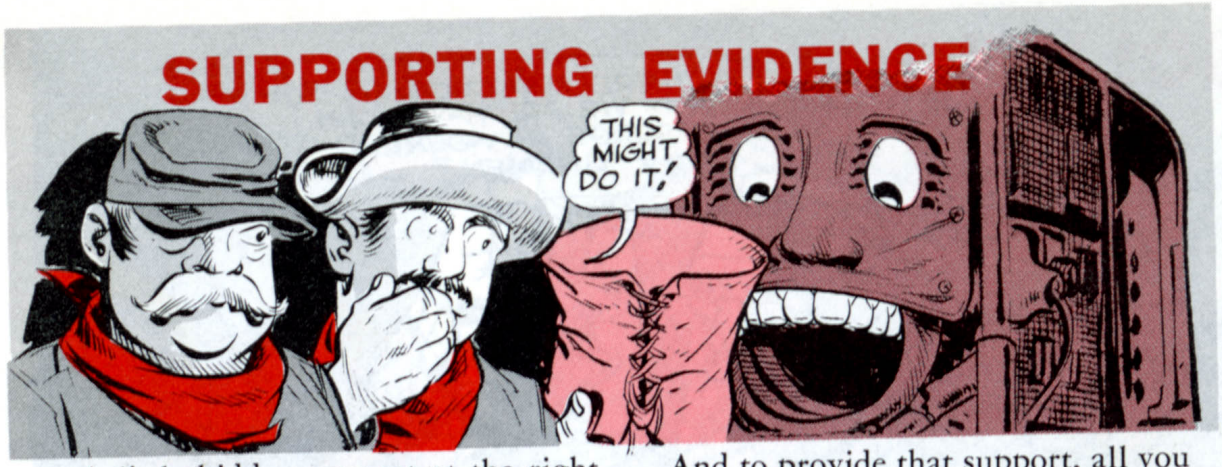
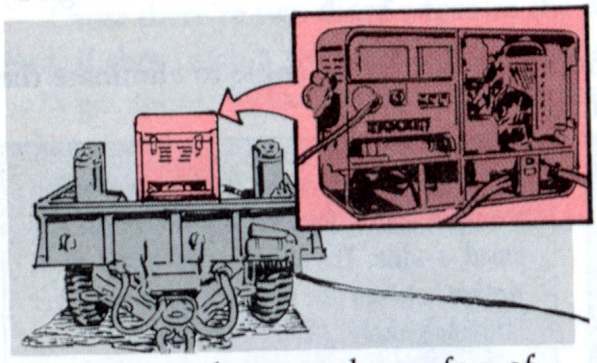
SUPPORTING EVIDENCE



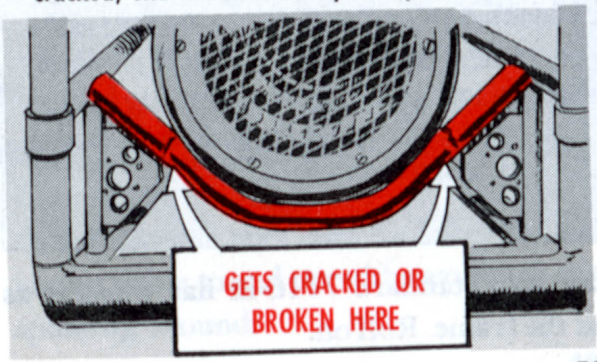
A little hidden support at the right place has saved many a good cause.

Take the rear cross member of your PU-26A/U Power Unit. That part of the tubular frame carries most of the weight of the generator, and also soaks up more than its share of vibration.

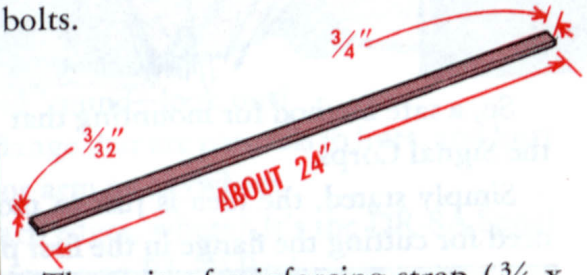


As a result, more than a few of them have ended up cracked, or even broken. Trouble is, that part of the frame is way down under and can be overlooked real easy.

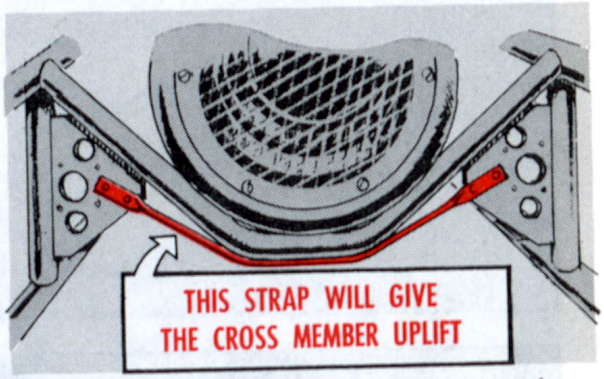
So, next time you pull a maintenance check, look extra close at the cross member—right where it joins the gusset support. If she's cracked, she needs some uplift—quick.



And to provide that support, all you need is some steel strapping, about two feet long . . . a little activity with a welder's torch . . . and maybe some nuts and bolts.

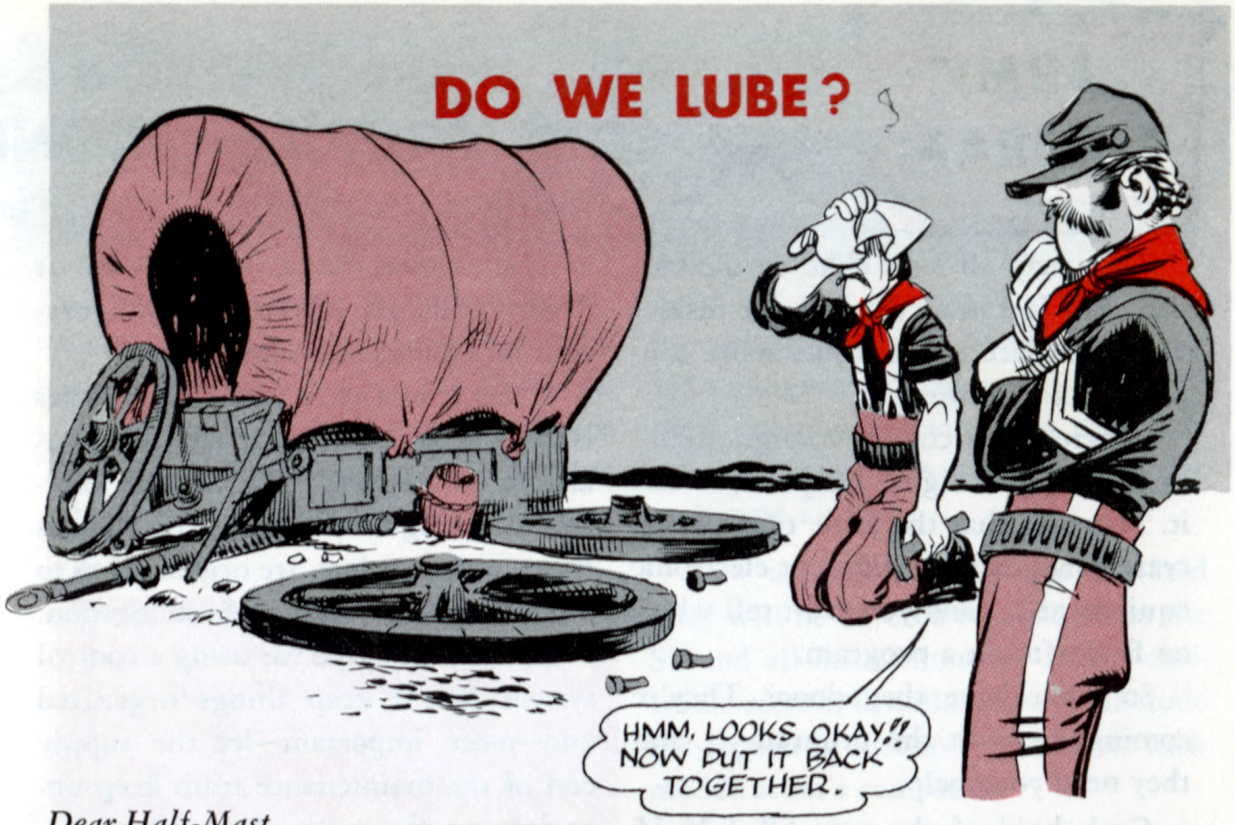


The strip of reinforcing strap (¾ x 3/32-in) should first be welded flat against the under side of the rear cross member. Then twist the two ends of the strapping so they lay flat against the gusset.



Those ends can be secured either by using the welder's torch again, or drilling a couple of holes in each gusset and using nuts and bolts.

Once that strap is firmly fixed to the two gusset supports, your rear cross member will enjoy all the uplift it'll ever need.



Dear Half-Mast,

Draw your peepers over to paragraphs 8g and 9c(1)(c) of TM 38-660-2, (Aug 59), "Organizational Maintenance Instructions and Procedures for Administrative Motor Vehicles."

That first reference which talks about the preparation of new equipment for operation, and refers you to the other one, which says: "Repack grease lubricated wheel bearings and adjust."

This means that all the wheels of a new vehicle must be pulled and the bearings removed, cleaned, repacked and reassembled with a terrific cost of time and material for unnecessary work.

Is this really necessary on a new vehicle? Repacking bearings on a new vehicle, I think, serves no purpose other than to load a shop down with unnecessary work.

Mr. H. L.

Dear Mr. H. L.,

TM 38-660-2 has no intention of making you do unnecessary work. All it wants you to do is to determine whether the wheel bearings of new vehicles **are** lubed and in good shape.

To do this on a new vehicle, you're going to have to remove the hub caps or what-have-you, and inspect the bearings to see if they're lubed and adjusted right. If they check out OK, then no repacking or adjusting is needed. But, if they don't, then you'll have to do whatever work is needed to set 'em right.

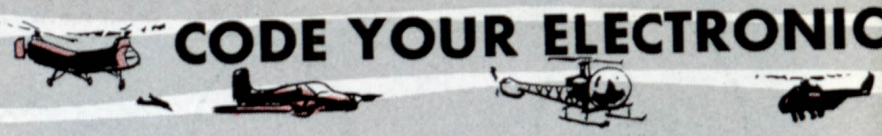
It's been known to get a new vehicle hot off the production line and find a wheel bearing or two not lubed or adjusted right. TM 38-660-2 just doesn't want you to take any chances.

Half-Mast

ARMY AIRCRAFT

AVIONICS MAINTENANCE AND DA FORM 1352 GET TOGETHER TO . . .

CODE YOUR ELECTRONIC



They may all look alike on the outside, but just wait till you get inside! The difference is sometimes more confusin' than amusin'.

Different "electronic configuration" as the TC and Signal Corps types call it. Meaning that the same type of aircraft sometimes has different electronic equipment . . . and you can't tell who's on first without a program.

So what have they done? They're coming up with the program . . . and they need your help.

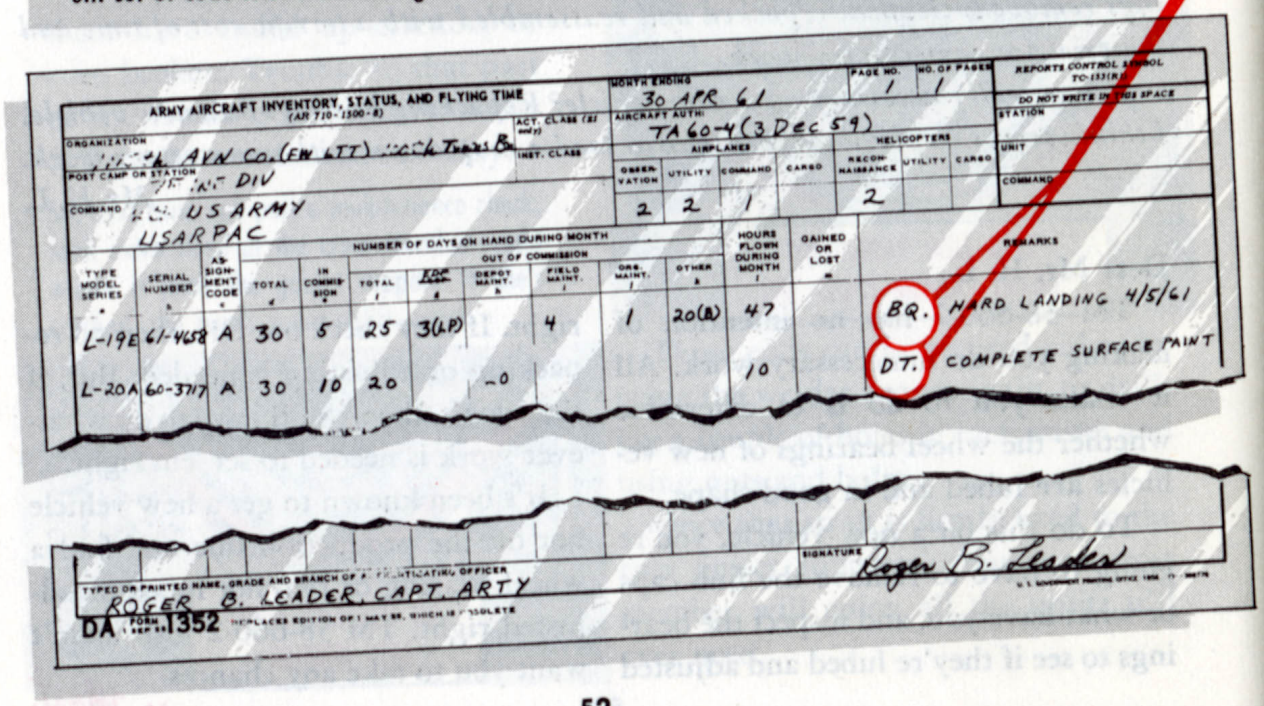
Grab hold of the new SB 1-15-15 (21 Apr 61). It sets up a configuration coding system for Army aircraft **worldwide.**

The formal name for this SB is "Army Aircraft Electronic Configuration Identification Codes."

What it means to you airfield types is that the Army has intensified its standardization program for aircraft electronic configurations. It also means these configurations are organized as to aircraft type and geographical location.

So the time's ripe for using a control system that'll keep things organized and—more important—let the supply end of the maintenance team keep up-to-date on the exact electronic equipment you're using . . . today.

The codes are just to make it easier to record these configurations on the same DA Form 1352 (Army Aircraft Inventory, Status and Flying Time) you're now filling out each month. So, besides the old codes used to designate the status of each aircraft, the same form will include a different set of code letters describing the status of each aircraft's electronic configuration.



ARMY AIRCRAFT INVENTORY, STATUS, AND FLYING TIME (AR 710-1500-8)

MONTH ENDING: 30 APR 61 | PAGE NO. 1 | NO. OF PAGES 1

REPORTS CONTROL SYMBOL TC-153(R)

DO NOT WRITE IN THIS SPACE

ORGANIZATION: [illegible] AVN Co. (FW LTT) [illegible] Tours Bn

ACT. CLASS (S1 only)

INST. CLASS

AIRCRAFT AUTH: TA 60-4 (3 Dec 59)

POST CAMP OR STATION: [illegible] DIV

COMMAND: [illegible] US ARMY USARPAC

AIRPLANES				HELICOPTERS		
OBSERVATION	UTILITY	COMMAND	CARGO	RECONNAISSANCE	UTILITY	CARGO
2	2	1		2		

STATION

UNIT

COMMAND

TYPE MODEL SERIES a	SERIAL NUMBER b	ASSIGNMENT CODE c	NUMBER OF DAYS ON HAND DURING MONTH: TOTAL d	IN COMMISSION e	OUT OF COMMISSION: TOTAL f	EDP g	DEPOT MAINT. h	FIELD MAINT. i	ORG. MAINT. j	OTHER k	HOURS FLOWN DURING MONTH l	GAINED OR LOST m	REMARKS
L-19E	61-4658	A	30	5	25	3(LP)		4	1	20(B)	47		BQ. HARD LANDING 4/5/61
L-20A	60-3717	A	30	10	20		-0				10		DT. COMPLETE SURFACE PAINT

TYPED OR PRINTED NAME, GRADE AND BRANCH OF AUTHENTICATING OFFICER: ROGER B. LEADER, CAPT. ARTY

SIGNATURE: Roger B. Leader

DA FORM 1352 REPLACES EDITION OF 1 MAY 55, WHICH IS OBSOLETE

U.S. GOVERNMENT PRINTING OFFICE 1956

ARMY AIRCRAFT

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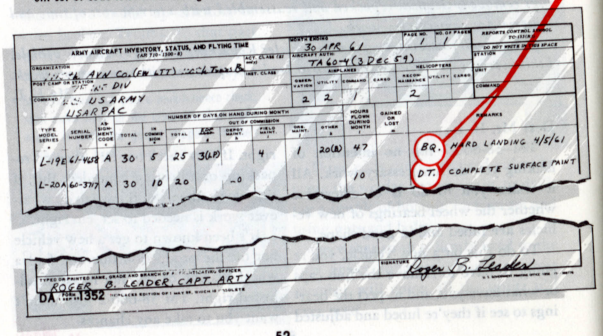

CONFIGURATIONS

These copies of the new SB 1-15-15 will be distributed automatically according to the requirement listed by your pub stockroom for TB AVN's on DA Form 12-7. But National Guard and Reserve outfits get the SB as an **O/MI-Gen** requirement on DA Form 12-5.

The codes are all two-letter combinations keyed to aircraft type (L-19, H-13, etc) and the major command area you're in (CONUS, USAREUR, USARPAC, USARCARIB, USARAL). There's a separate table in the appendix for each of these areas, just to make it harder for you to get confused.

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New aircraft coming into the field later will be covered by changes to the SB and all instructions for future electronic retrofit installations will include the reporting code to be used after each modification's completed.

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DON'T TREAT YOUR GENERATORS LIKE ORPHANS...

GIVE 'EM A HOME

Seems like many of the smaller rigs are always behind the door when maintenance time rolls around.

They just don't seem to get the tender, loving care that the more expensive, larger pieces of equipment get.

Maybe at the time it just doesn't seem important and you figure it's not worth the effort. But, something as simple as a crummed-up air cleaner will sideline your rig at the time you need it the most. And, all it wants is a little attention.

Your Homelite Model 15AD120-16 generator is a good f'rinstance.

If it starts missing, runs in fits and starts, or it's not giving out with the power you think she ought to—could be the air cleaner is clogged. All she needs is a chance to take a decent breath of clean air.

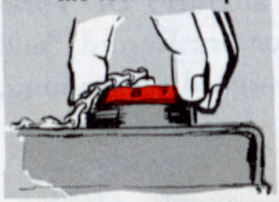
DAILY PM

Checking the air cleaner should be part of your before-operation PM.

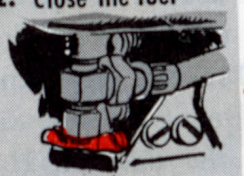
Could be that you've been giving it the go-by because you have to get at it from the underside.

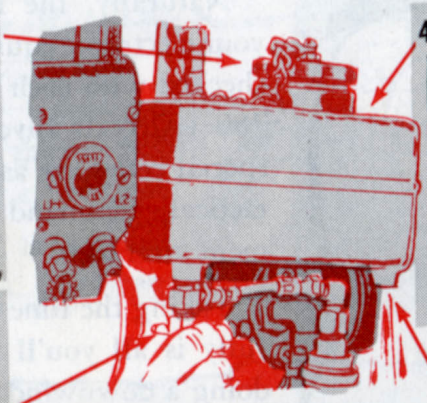
Once you eyeball the air cleaner on the Homelite and you see a batch of oil and dirt on the screen, here's what you want to do: Drain the fuel tank first. There's nothing to it.

1. You just loosen the fuel filler cap.



2. Close the fuel shutoff cock.





3. Remove the drain plug and let the fuel drain into a clean, dry container.

4. You tilt the generator to be sure the fuel tank is drained completely.

5. Then, put the drain plug back on and tighten the filler cap.

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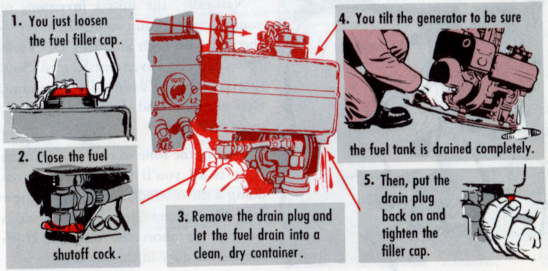
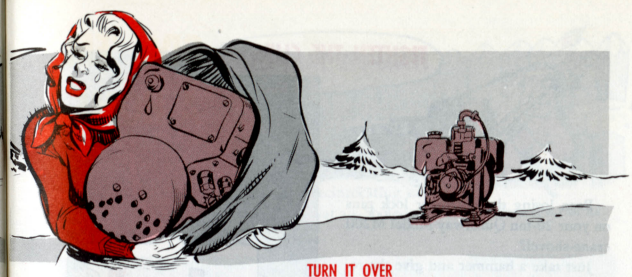
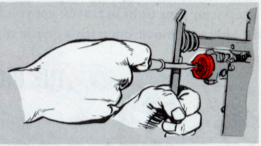




TURN IT OVER

This done, you turn the set on end with the generator assembly down.
Shove the mounting skids to the side and take off the screw and two washers from the air cleaner. Now, remove the air cleaner from the carburetor.



You separate the two retaining rings and screens from the cover . . . then clean the cover, rings, and screen in an approved solvent. Let them air dry.

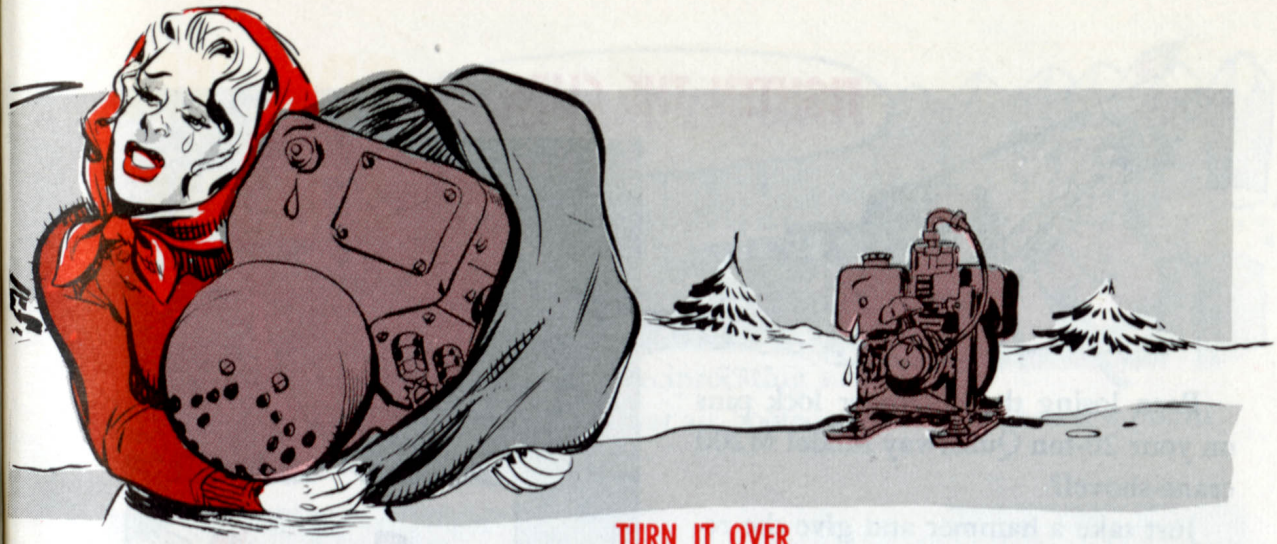
Before you reassemble the cleaner, give the once-over to the screw and washers, rings, cover, and screens. Look for cracks, breaks, bends, and excessive wear and tear. If the mesh is torn on the screens, you'll need new ones.

CAP AND BASKET

At the same time, you might as well check out the fuel filler cap and basket, and give them a good cleaning in the solvent. Could be that the basket is gooked up, too.

Give the cap, chain, and basket the eagle-eye for defects. You replace the parts if they're beat up or damaged.

A regular check-up like this should keep your Homelite humming "Home, Sweet Home."



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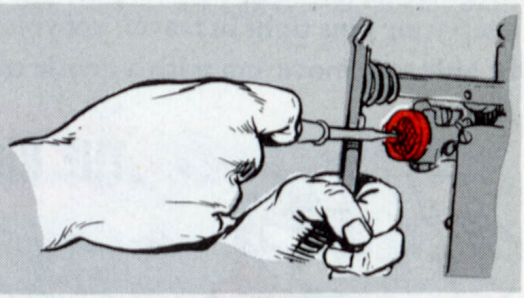

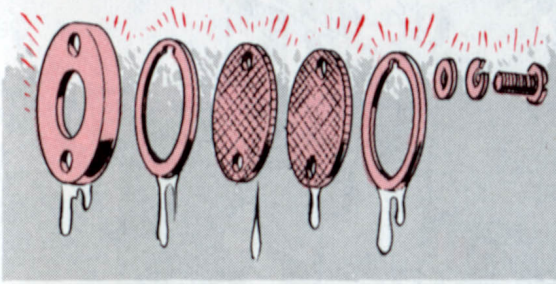

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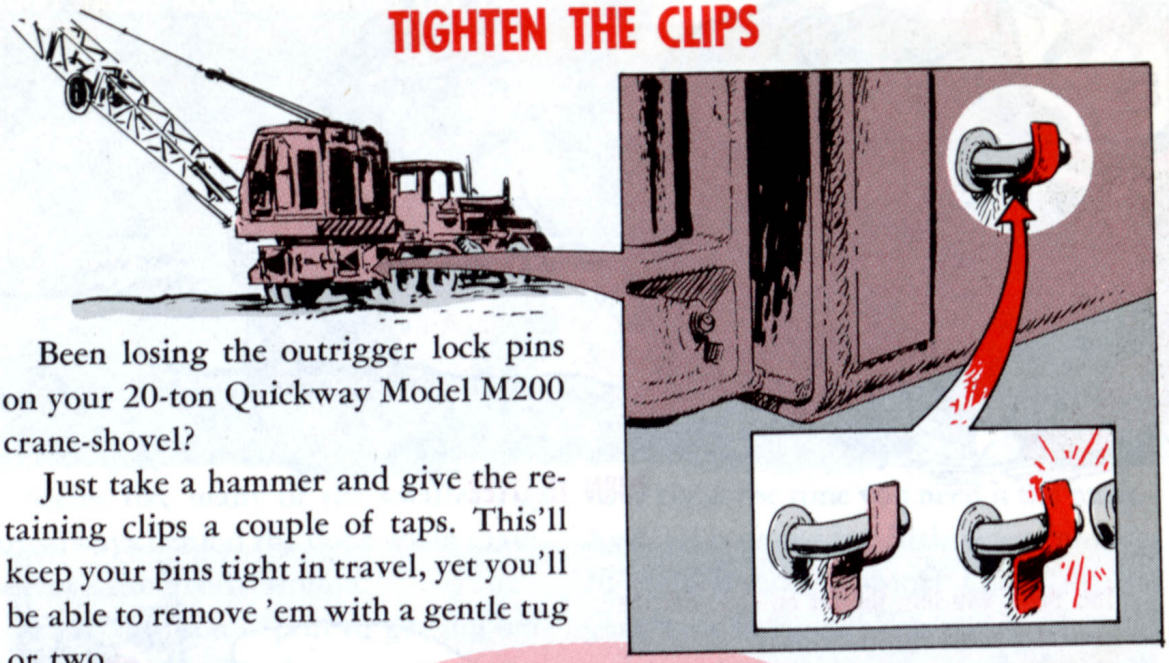
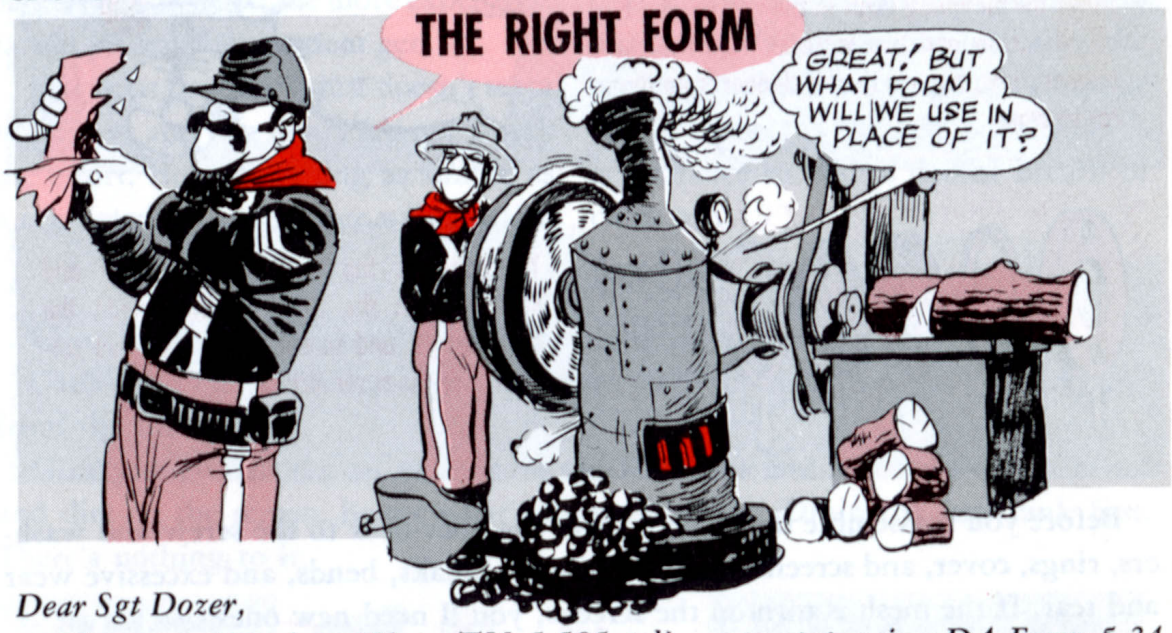
TIGHTEN THE CLIPS



Been losing the outrigger lock pins on your 20-ton Quickway Model M200 crane-shovel?

Just take a hammer and give the retaining clips a couple of taps. This'll keep your pins tight in travel, yet you'll be able to remove 'em with a gentle tug or two.

THE RIGHT FORM



Dear Sgt Dozer,

Change 1 (12 Aug 59) to TM 5-505 tells us to stop using DA Form 5-34, Utilities Inspection and Service Record, for scheduling and recording PM on our electric motor driven equipment.

OK, but what do we use in place of the 5-34 for scheduling our equipment?

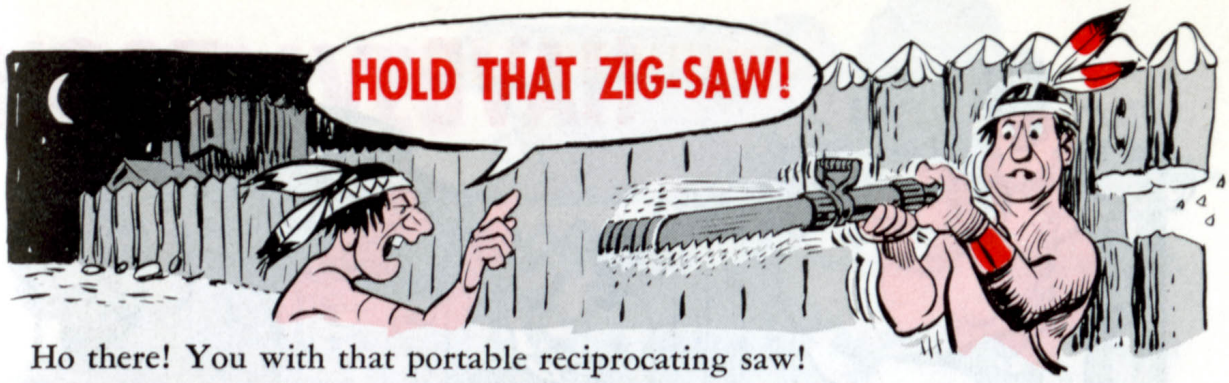
M/Sgt A. J. S.

Dear M/Sgt A. J. S.,

Take those items that used the 5-34 and add them to the DA Form 460, PM Roster, that you've already set up for your other rigs.

Use DA Form 2320, Engineer Equipment Monthly Operational Record, to check off your daily PM services. Use DA Form 464 to record your Quarterly Services.

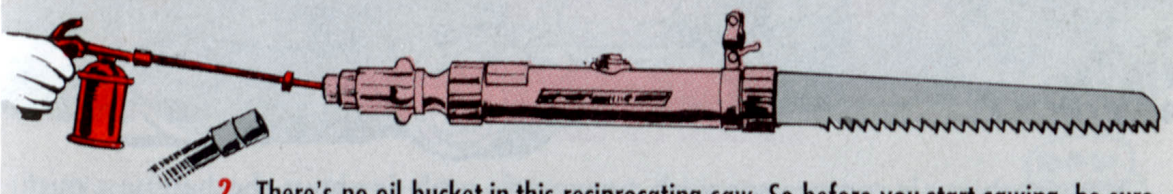
Sgt Dozer



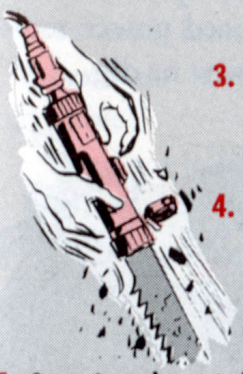
Ho there! You with that portable reciprocating saw!

Before you begin biting wood with that air-booted zig-saw, here're a few points you wanta keep in mind:

1. Blow the air line to clear it of dirt. Then check the saw's air inlet screen and clean out any dirt.

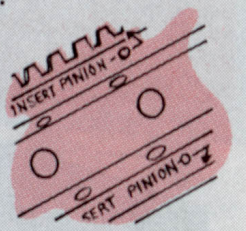


2. There's no oil bucket in this reciprocating saw. So before you start sawing, be sure to prime with OE, and hook a full oiler into the line. Refill the oiler every four operating hours.



3. Choke off the saw when it's not cutting wood. This saw has more muscle than bones. It'll shake itself to scrap fast if you hold that trigger valve down when it's not making sawdust.

4. You never put this saw to bed wet or dirty. Before you lay it away in the box after working in rain or under water, wash the blades and pistons in OE—. Feed a pint of OE through the line for five minutes before shutting down.



5. Open it and put it back together by the numbers. The pinion gear, in particular, must go back **exactly** on the limit line of the piston—otherwise it'll tear teeth off the piston racks and deadline the saw.

6. Pull it off the line before trouble doubles. Little trouble borrows big trouble fast in this power saw. So you fix or report small trouble pronto—before a two-bit part failure deadlines the whole tool.

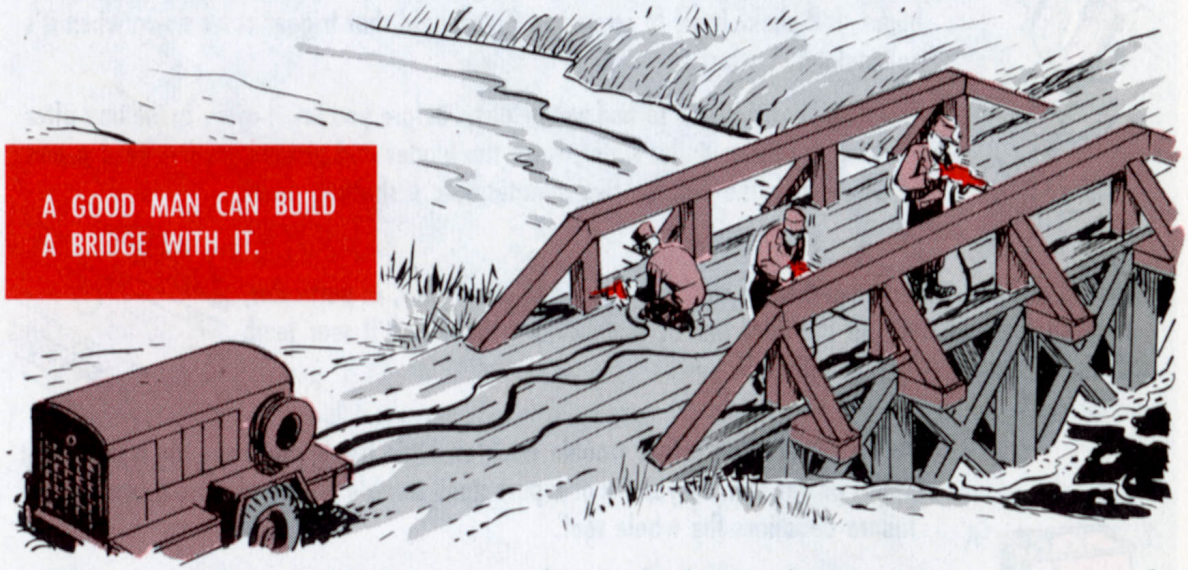
7. In freezing weather, add antifreeze like it says in the LO. Fill a second oiler with antifreeze and couple it into the line between the compressor and the saw oiler.

8. Fire off all UER's before sundown. The faster you fire off UER's on defective parts or assembly, the quicker you collect replacements before warranties run out. Your UER's will also alert the tech service if any parts need beefing up to stand the gaff.

HAVE TOOLS—

Your mobile air compressor with pneumatic tools is about the handiest outfit a unit can own.

On a minute's notice, this rig can move out wherever you need power tools to bore, break, chisel, drill, blow, hammer, tamp, pick, pump, saw or dig.

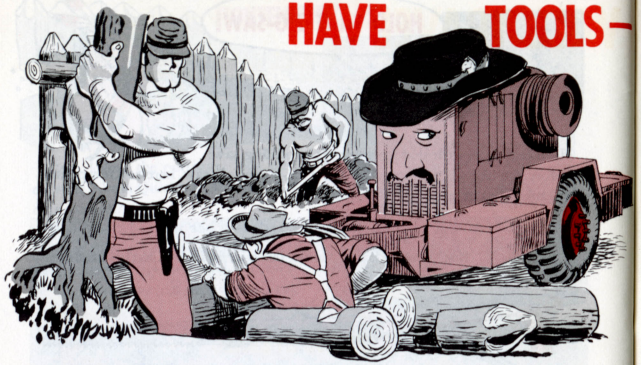


There's just one catch—you gotta be on the ball to keep an octopus-type outfit like this in shape to operate at full strength.

Either you boss this rig, or it'll run you ragged. Once you let unfinished business back up in those tool boxes, you've got a mess of trouble. Your rig can't carry out orders, and you're a sittin' pigeon for inspectors.

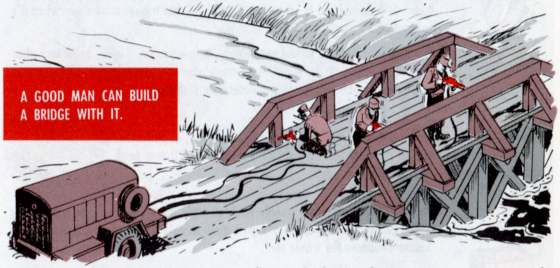
So here're some things you can do to keep your compressor and tool outfit ready to roll on a minute's notice—

HAVE TOOLS— WILL TRAVEL



Your mobile air compressor with pneumatic tools is about the handiest outfit a unit can own.

On a minute's notice, this rig can move out wherever you need power tools to bore, break, chisel, drill, blow, hammer, tamp, pick, pump, saw or dig.



There's just one catch—you gotta be on the ball to keep an octopus-type outfit like this in shape to operate at full strength.

Either you boss this rig, or it'll run you ragged. Once you let unfinished business back up in those tool boxes, you've got a mess of trouble. Your rig can't carry out orders, and you're a sittin' pigeon for inspectors.

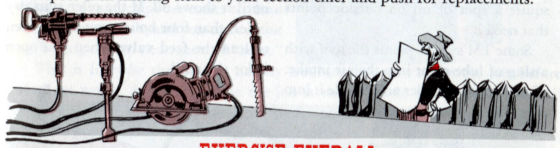
So here're some things you can do to keep your compressor and tool outfit ready to roll on a minute's notice—

ROLL CALL

Take stock, by the numbers, of every air tool, attachment, hose line, accessory, and spare part on your rig.

Then check what's actually on the rig against the stock list in the TM, or the SM 5-4 that covers your compressor outfit.

Report each missing item to your section chief and push for replacements.



EXERCISE EYEBALL

Now you know what's on hand—but is it in shape to operate? So you check over each item, first slicking it up so there's no rust or crust to cover up trouble.

You eagle-eye each item for trouble like missing parts, loose connections, leaking gaskets, binding controls, warped blades, dirty plates, bent side rods, jammed chuck latches, crossed threads, broken fittings—every big and little trouble that can be caught and fixed before a job calls for the tool right now.

While you're about it, you tighten and straighten and fix everything that you can handle with the hand tools on your rig.

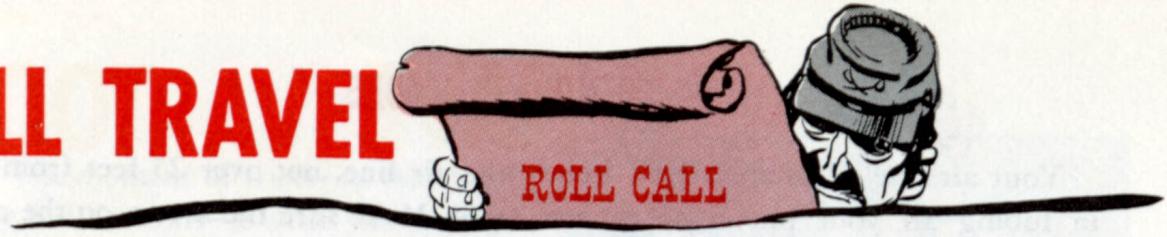
Then you unload all other damaged items on your shop, and tag 'em for repair or replacement.

PUB SEARCH

None of these air tools is complicated like an ICBM, but you still use your TM and LO for operating, lubing, and maintaining the equipment. So check DA Pam 310-4 for the LO's and TM's on the items that make up your set. In older compressor sets one manual covers the outfit. In later sets you find separate manuals on each air tool.

TURN

WILL TRAVEL



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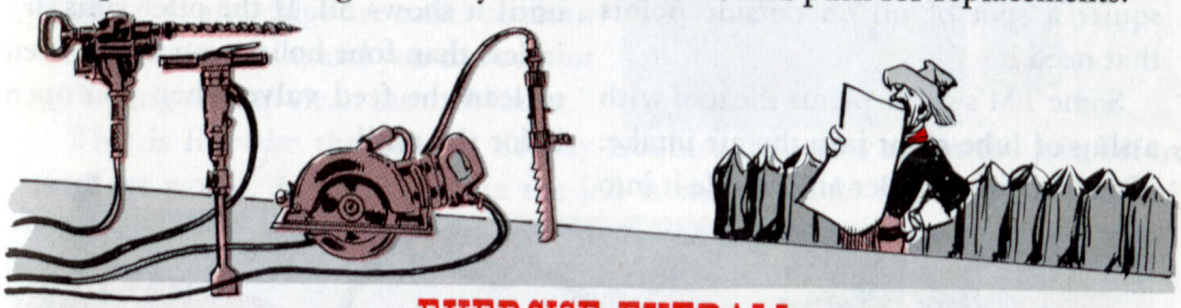

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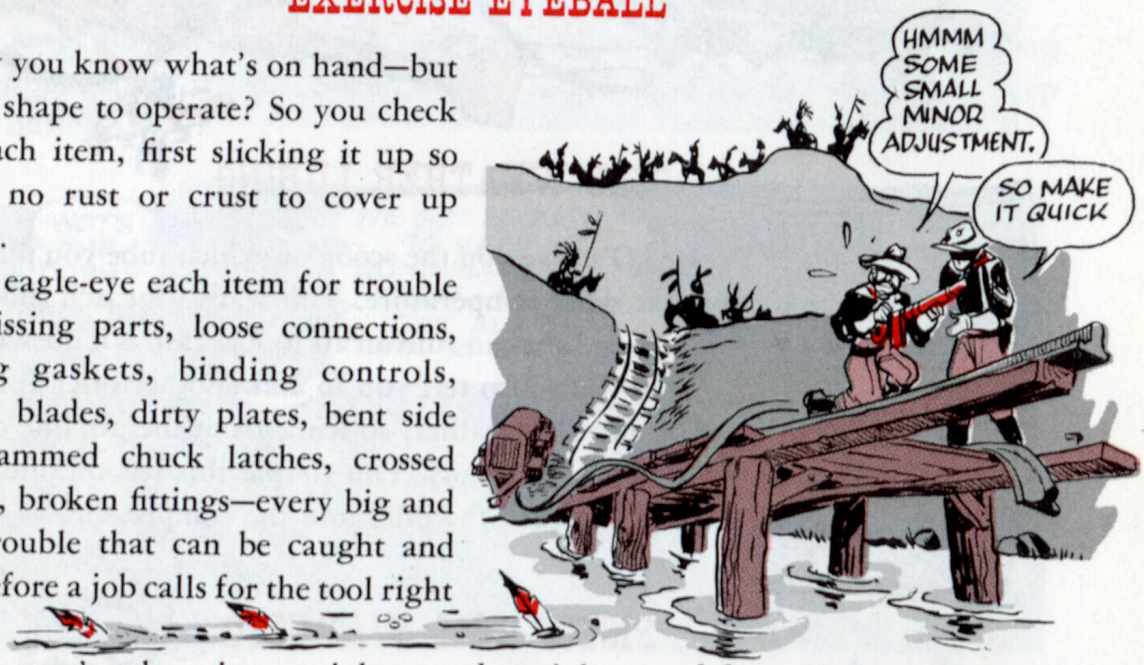

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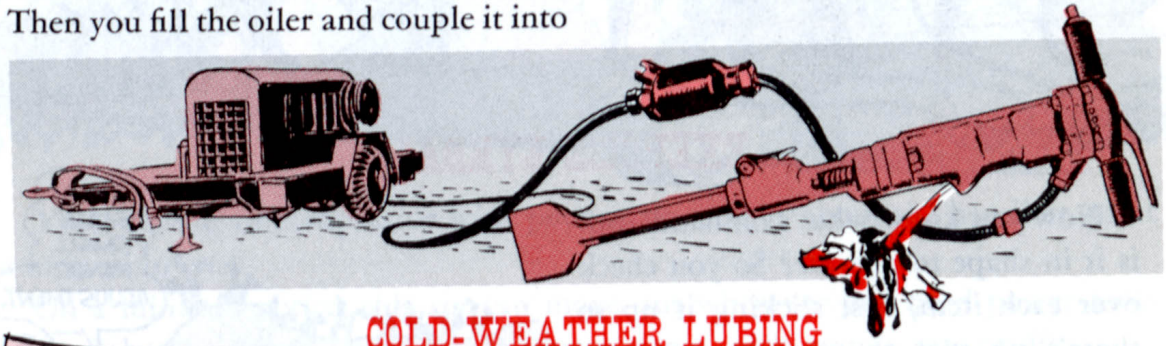
LUBING AIR TOOLS

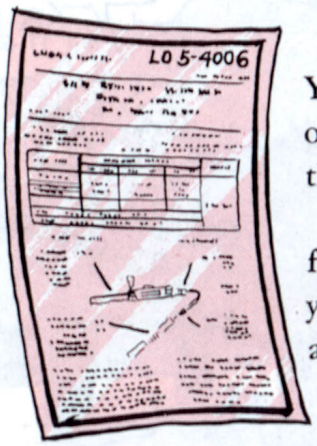
Your air line oilers are MUST items in lubing all your pneumatic power tools. This includes tools with oil pockets, because they can't store enough lube for more than a few minutes' operation. Of course you also take care of grease points, like it says in the LO, and you squirt a spot of oil on outside points that need it.

Some TM's say to prime the tool with a slug of lube right into the air intake. Then you fill the oiler and couple it into the air line, not over 25 feet from the tool. Make sure the arrow on the oiler points toward the tool, and the feed is adjusted so a little oil comes out the tool's air exhaust.

But don't let cold-air vapor fool you. Hold a wad of waste at the exhaust until it shows oil. If the oiler runs dry in less than four hours, you might need to lean the feed valve when you open it for the refill.



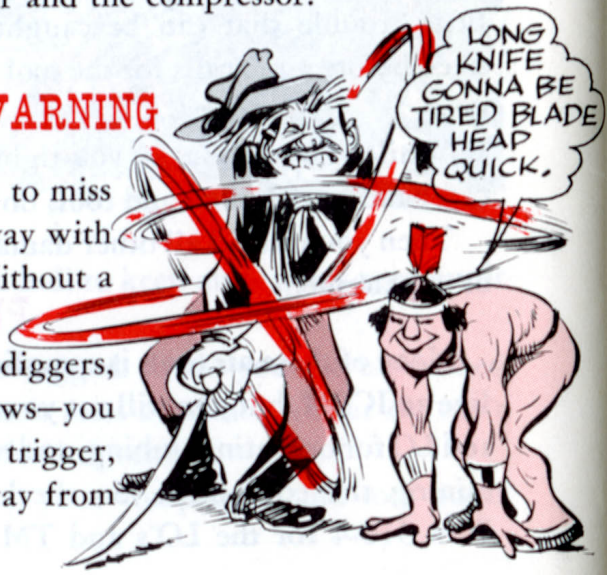
COLD-WEATHER LUBING



Your LO's give you the scoop on which lube you put into the oiler at what temperature. You want to watch this, because the wrong lube can ruin an air tool as fast as it does an engine.

Your LO's also tell you to add another oiler full of anti-freeze in cold weather, so icing from the air line can't clog your pneumatic tools. You couple this second oiler into the air line between the oiler and the compressor.

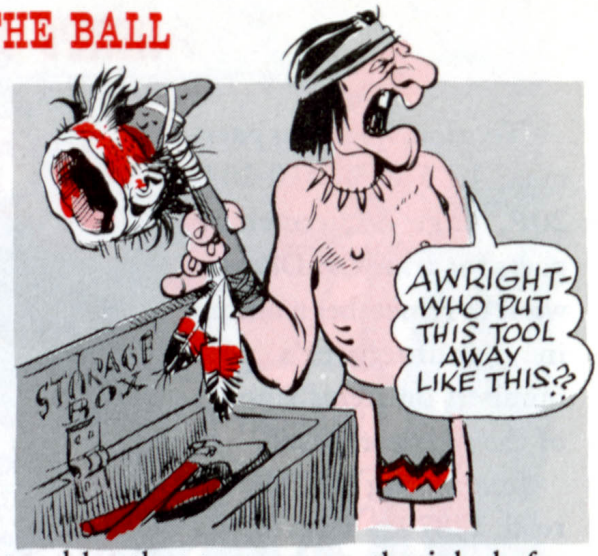
PISTON TOOL WARNING



You know it takes more out of your arm to miss a swing than to land a solid punch. Same way with piston tools—they need something to hit. Without a work load, vibration shakes 'em up.

So on all piston tools—like hammers, diggers, breakers, rock drills, and reciprocating saws—you take the tool to the work before pulling the trigger, and shut it down pronto when you pull away from the work.

AFTER THE BALL



The moment of truth—as they say in the Bull Sessions—is when you uncouple a tool that's been working on a job. This is the time to make sure it's in shape to work next time you need it.

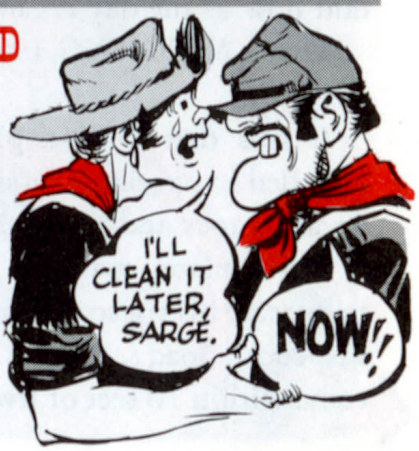
First of all, you never want to bed down a dirty tool in the storage box. Mud, crust and chips are easier to clean while they're fresh, and you can't count on having time to clean the tool "later."

This is likewise the time to fix any troubles that turn up on the job, before they get worse. A power tool on the job is worth ten in the shop, so you pull as much of the maintenance as your tools and experience allow.

Same goes for chipped, dulled, bent or broken bits, chisels, drill rods, nail sets, gages, moil points, tamping pads, picks, blades, couplings and hose.

You never stow a working part that's unsafe, or unfit for work. Fire 'em into the shop for repair or replacement, while you still have spares on the rig to keep you in business.

YOU GOTTA BE HARD



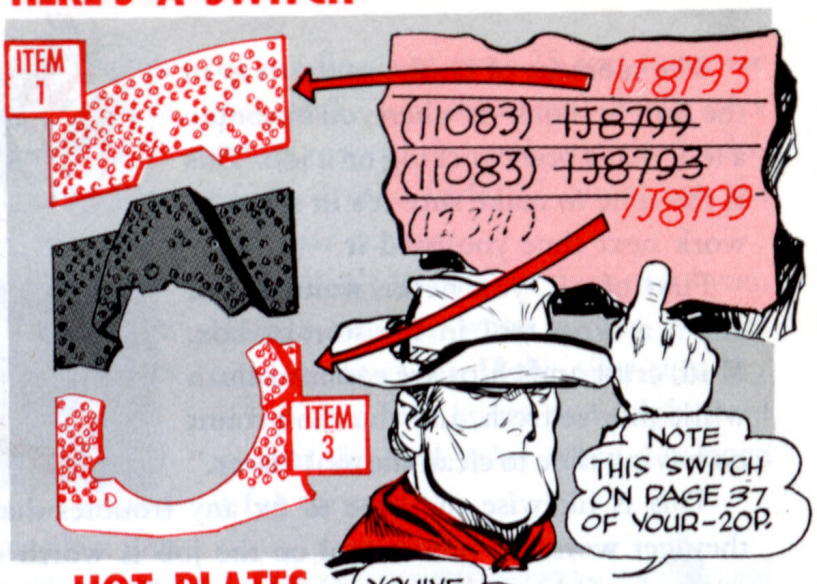
You can't keep a rig like this compressor with air tools on a work-ready footing with promises—they keep gaining on you.

Only way you can win is to shape up the whole outfit clean, sharp and complete—then allow nobody, including yourself, to load any unfinished business back into the tool boxes.

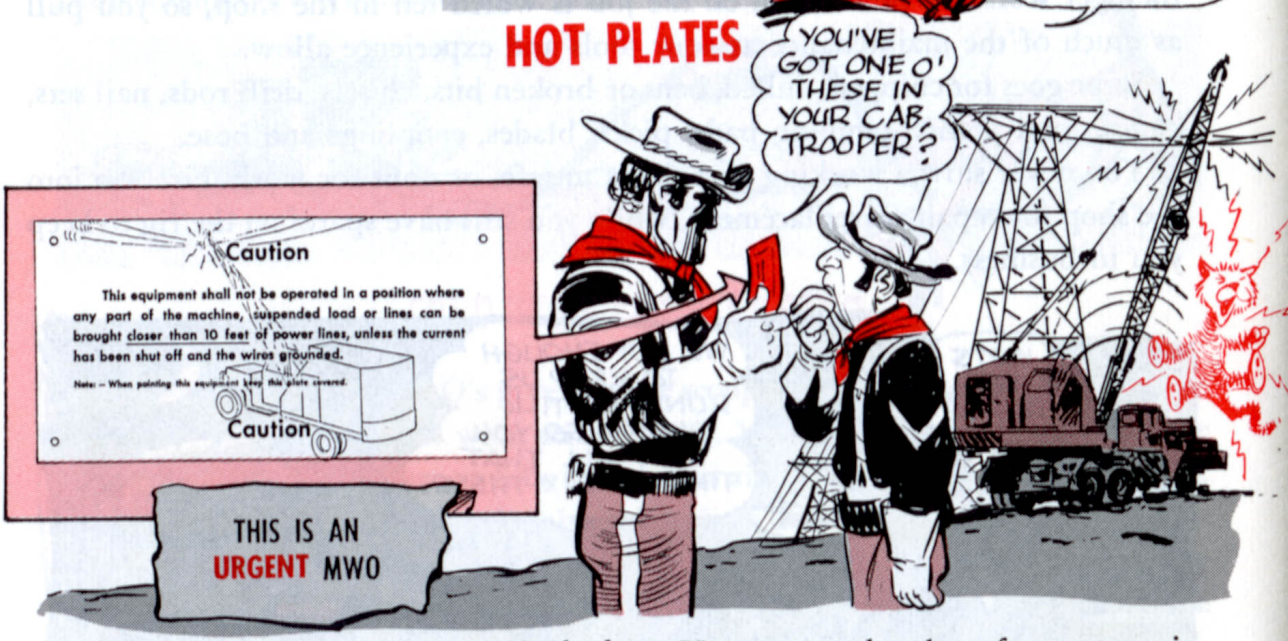
HERE'S A SWITCH

'Tention, Engineer parts men: In TM 5-2410-204-20P, page 37, covering parts for your Cat D8, you want to remember a mixup in manufacturer's part numbers on Items 1 and 3 of the radiator guard.

Item 1, fig 24, should read 1J8793. Item 3, fig 24, should read 1J8799.



HOT PLATES



Some outfits seem to have overlooked an important Engineer MWO. It's more than five years old, but just as important now as the day it came out.

That's MWO ENG 1999-4 (20 July 1955).

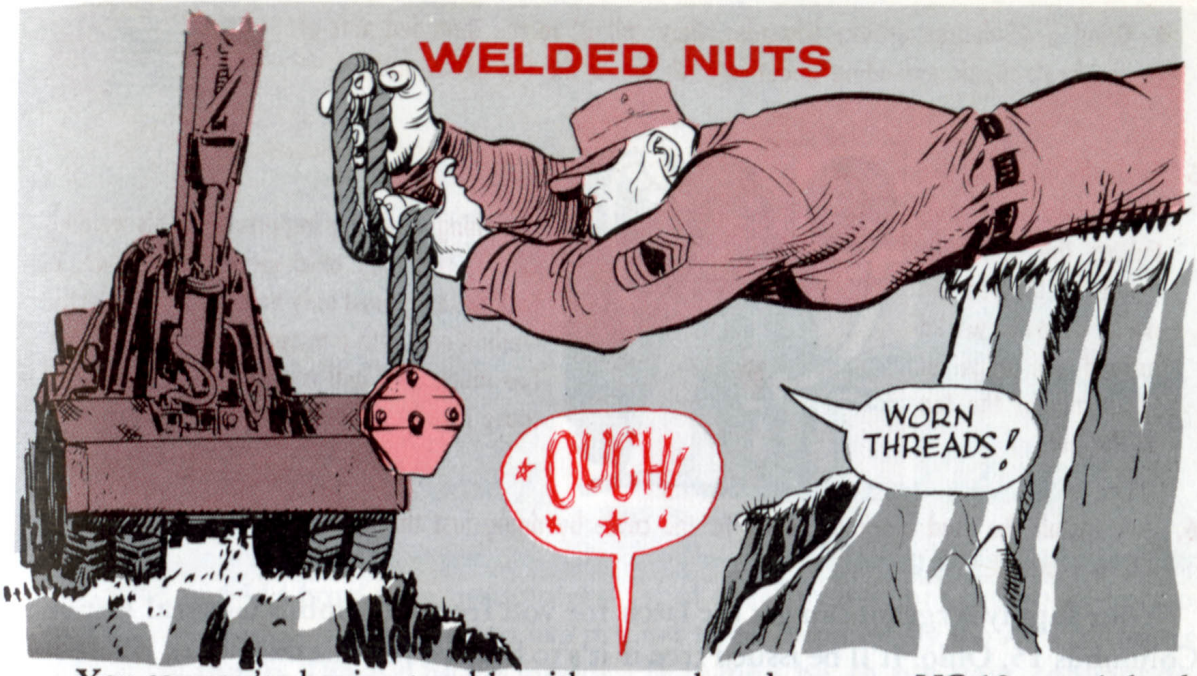
It says that caution plates must be installed in operators' and drivers' cabs on all cranes and crane-shovels.

These plates warn an operator not to operate his rig so that any part of it—suspended load... lines... boom... will come within 10 feet of live power lines.

You can get the plates for your equipment through regular Engineer supply channels under Engineer Stock Nr MWO 000 ENG1999-4, Kit, MWO—free to using units.

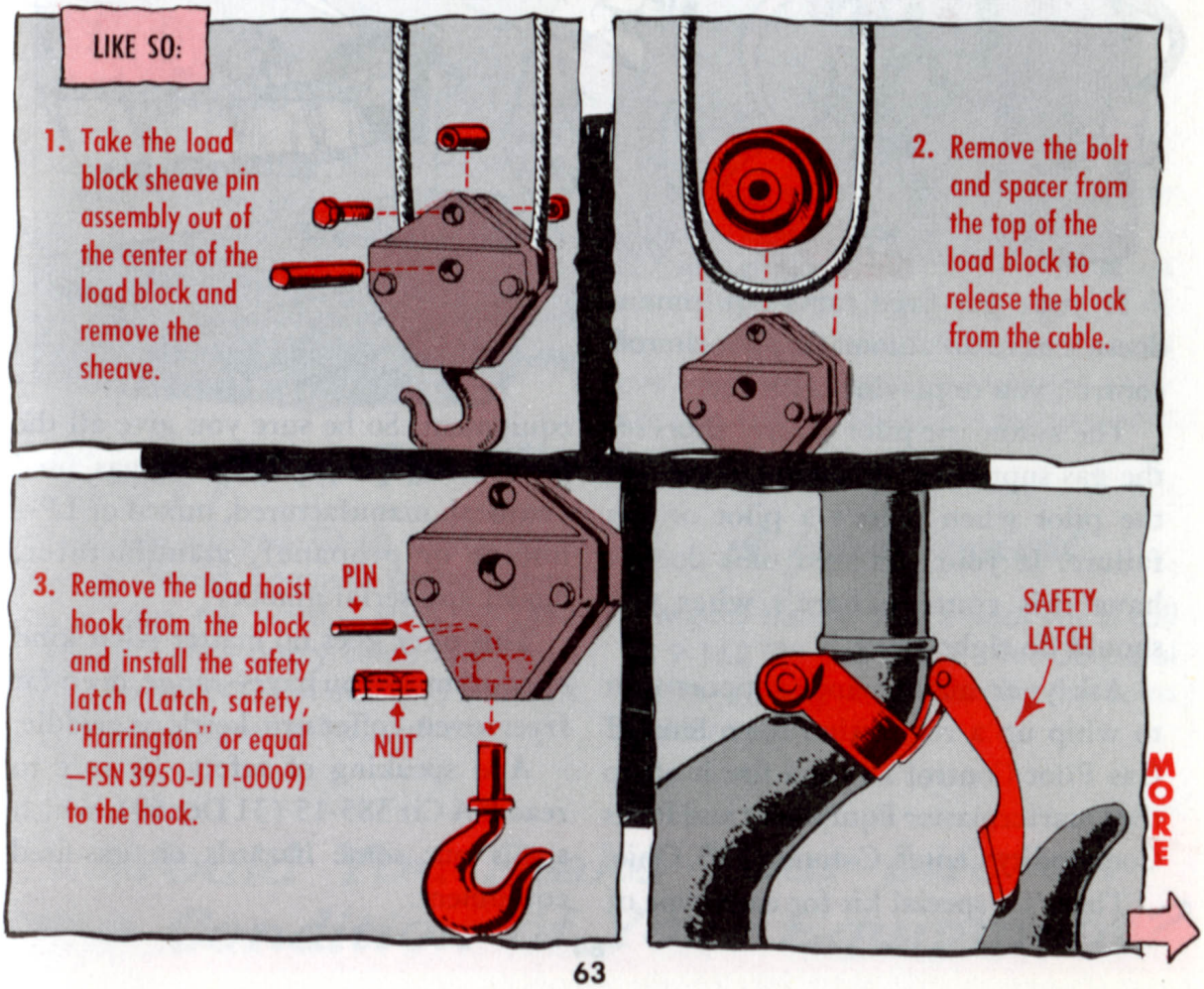
When you make out your requisition, be sure you give the FSN, make, model, and serial number of the equipment you need the plates for.

This is an urgent deal. If your cranes or crane-shovels don't have these caution plates, get 'em and install 'em pronto.

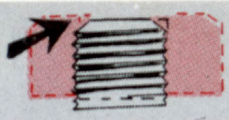


You say you're having trouble with worn threads on your NC-10 crane's hook assembly? And you're afraid somebody's gonna get clobbered if that hook comes loose?

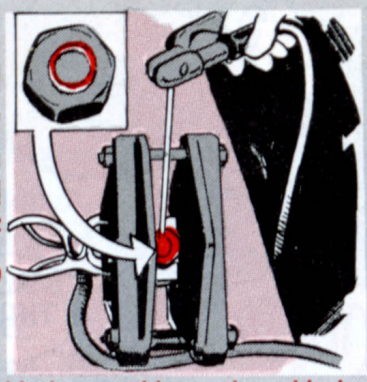
Well, here's a coupla things you can do to make that hook foolproof: Weld the hook nut and add a safety latch to the hook.



4. Grind a 45-degree groove (chamfer, they call it) to the threaded part of the hook shank, extending about 1/8-inch below the top of the nut.



5. Stick the hook in the block, then install and tighten the nut. Now insert the tapered pin and apply weld around the edge of the shank at the top of the nut.

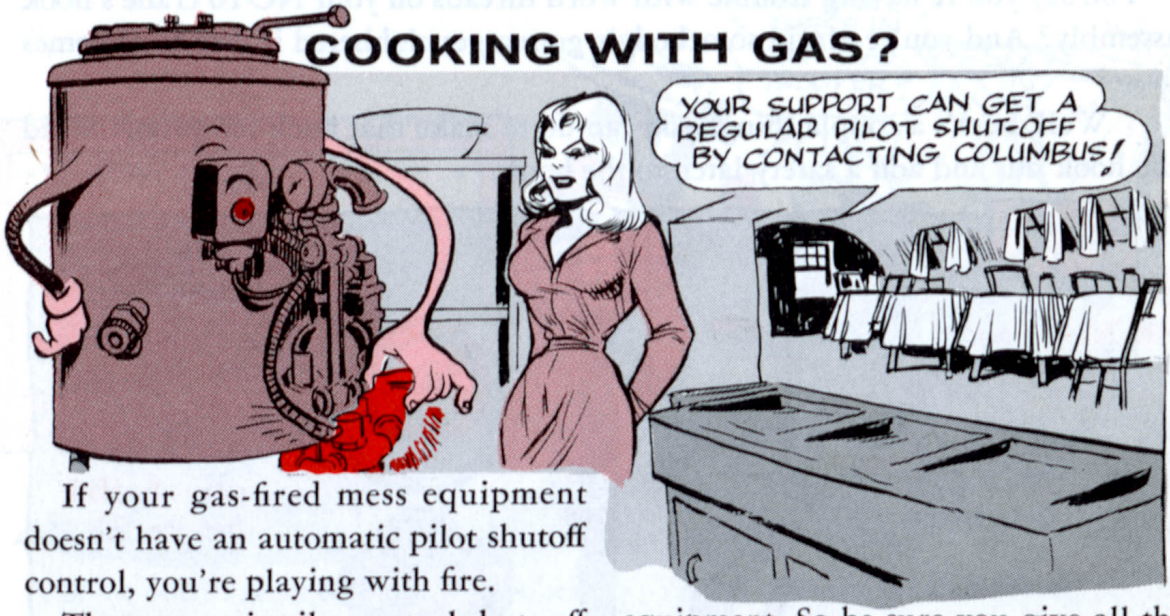


Two things are very important in this welding job: 1. Use only mild electro weld rods. 2. Tack welding must only be done by the electric method and with a minimum amount of heat. Too much heat will crystallize the metal and cause it to break under strain.

6. Now install the load block assembly to the cable by doing just the opposite of what you did in 1 and 2.

Your supply sergeant can get the latch for you from Columbus General Depot, Columbus 15, Ohio. It'll be issued free if it's to be used for this fix.

COOKING WITH GAS?



If your gas-fired mess equipment doesn't have an automatic pilot shutoff control, you're playing with fire.

The automatic pilot control shuts off the gas supply to the main burner and the pilot when there's a pilot or gas failure. If your gas-fired unit doesn't have this control, here's what you should do right away:

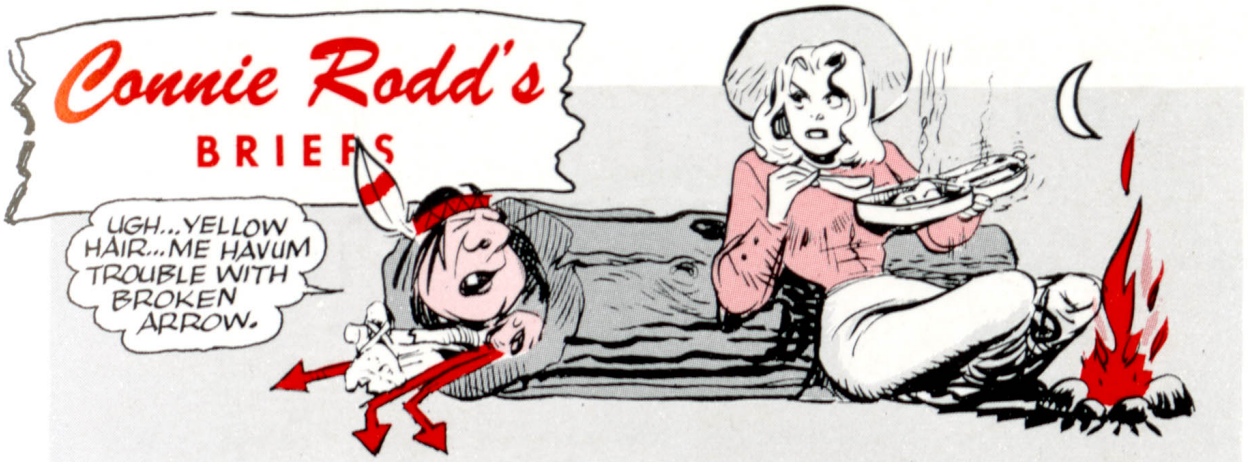
Ask your maintenance support unit to whip up a requisition for a Shutoff Gas Pilot Control Kit and fire it off to the Quartermaster Equipment and Parts Commodity Center, Columbus 15, Ohio.

There's a special kit for each type of equipment. So be sure you give all the facts about yours: Kind of gas used (natural, manufactured, mixed or LP—butane or propane), manufacturer, model and serial number.

This offer goes no matter what kind of equipment you have—range, deep-fat fryer, oven, coffee urn, kettle or griddle.

And speaking of safety, be sure to read DA Cir 385-15 (31 Dec 59), which spells out some hazards on gas-fired equipment.

Connie Rodd's BRIEFS



Heard the Word?

It's the latest. Right now there's only one kind of 6544 hard tube modulators that Nike-Hercules outfits want to use in their track radars. Those'd be the modulators, FSN 5960-561-8230, made by Machlett company. As soon as modulators made by other companies are given the once-over and get the green light for use, your support unit will pass the word to you.

Coffee break?

Waltz up to your coffee urn today and ask it, "you got 'um flat bottom?" If it has and it's a Blickman, it's due for an application of MWO 10-415-2 (4 Nov 59). Very important. Blickman urns with flat bottoms need special welding support to keep from springing leaks.

4-way fix on TD-18's

In case all you TD-18 tractor users haven't heard, Engineer support shops now have the word — MWO 5-2410-203-35/1 — to apply some real timely fixes on Series G454 and G455 models. Ask your support unit about 'em.

No spot check?

The word is being passed around that spot check inspections are no longer going to be required by the AR 750-series. That may be so but your commander can make an informal maintenance inspection whenever he thinks he should . . . so don't get caught with your maintenance down. Be ready for a spot check any time . . . whether the AR's call for them or not.

New TM on tools?

You say you can't tell your adze from a post hole auger?

Read all about 'em in TM 5-461, hot off the press (Mar 60). You get inside info on all handtools issued in pioneer's and carpenter's sets, plus candid camera pix and tips on how to use and care for tools.

A friend indeed

Mighty handy. That's what you'd call SB 9-162 (28 Dec 59). It's for Corporal outfits—to help them identify the items in their system.

Would You Stake Your Life on the Condition of Your Equipment?

JUST
A
LITTLE OL'
NEGLECTED
CONNECTION
CAN DELAY A MESSAGE...
STALL A TANK
CLOBBER A PLANE
LOSE A BATTLE